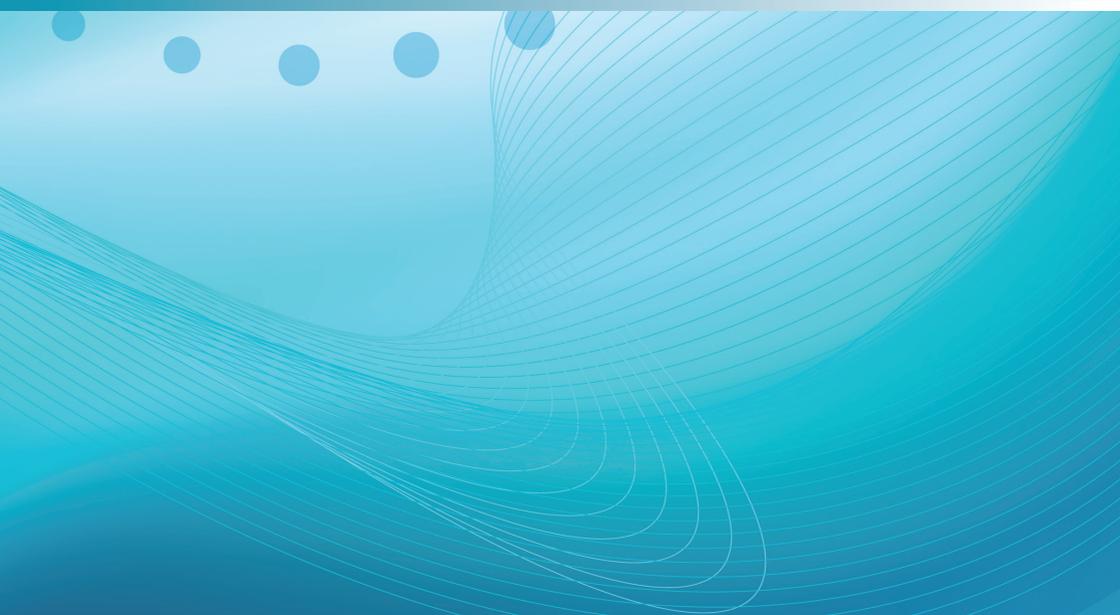
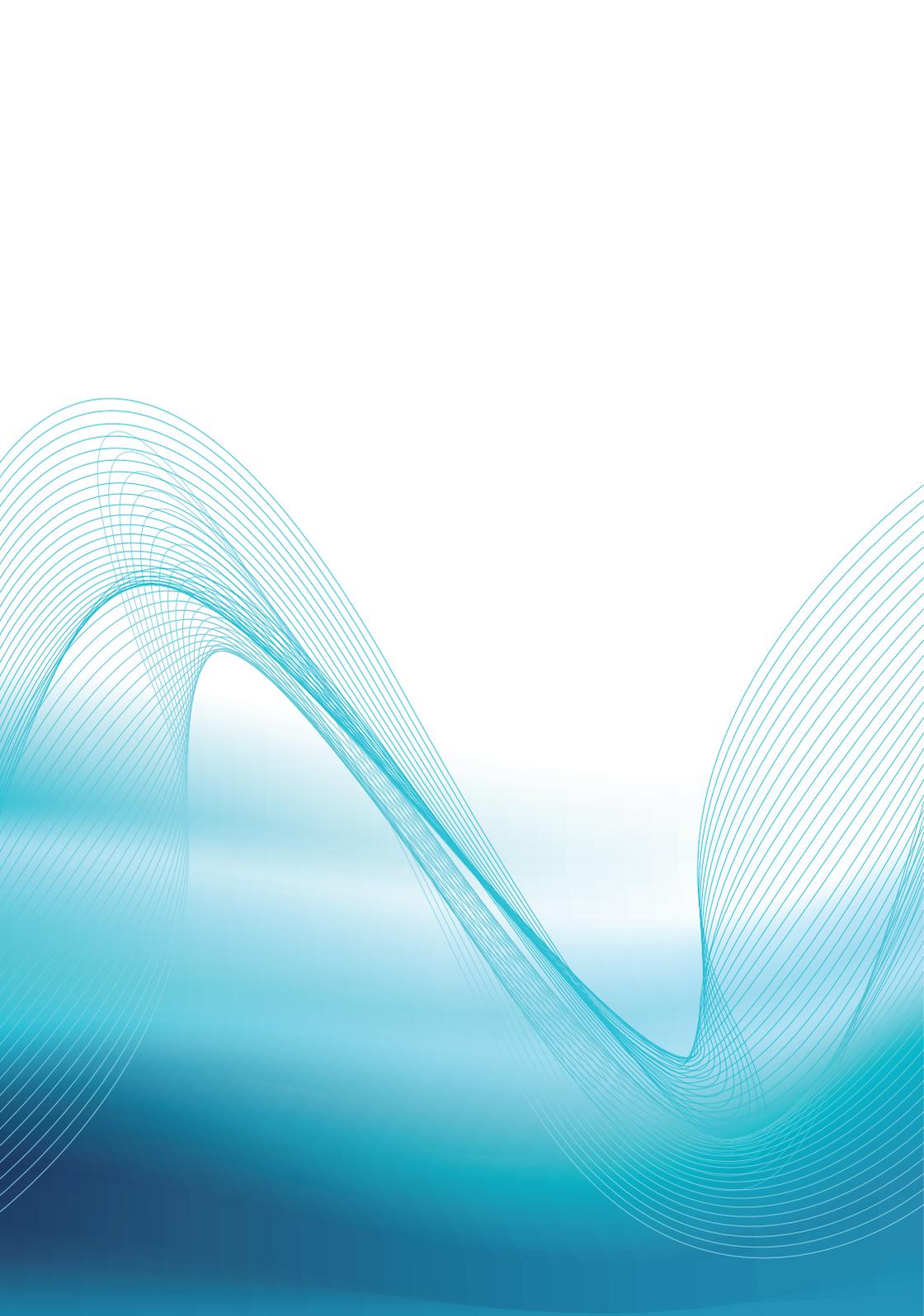


A UNIVERSITY BENCHMARKING HANDBOOK

Benchmarking in European
Higher Education





A UNIVERSITY BENCHMARKING HANDBOOK

BENCHMARKING IN EUROPEAN HIGHER EDUCATION

The EU-funded project Benchmarking in European Higher Education was implemented by four partner organizations: the European Centre for Strategic Management of Universities (ESMU), the Centre for Higher Education Development (CHE Consult), the International Centre for Higher Education Management (ICHEM), University of Bath and the Institute of Education (IoE), University of London.

This *Handbook* has been finalised by Paul Benneworth based on internal reports produced by the project team in the context of the project.

During the framework of the project, a powerful benchmarking methodology has been designed and tested on four benchmarking groups on governance, lifelong learning, university-enterprise cooperation, and curriculum reform. This exercise brought together over 40 universities from all over Europe.

Project Team

Frans van Vught (Academic Leader)	ESMU President
Anja Balanskat	ESMU
Paul Benneworth	ESMU senior expert; CHEPS, University of Twente
Paulo Botas	ICHEM, University of Bath
Uwe Brandenburg	CHE Consult
Nadine Burquel	ESMU
Harry de Boer	CHEPS, University of Twente
David Coyne	ESMU senior expert
Christiane Gaehtgens	ESMU senior expert
John Goddard	Newcastle University
Jeroen Huisman	ICHEM, University of Bath
Hannah Leichsenring	CHE Consult
José Ginés Mora Ruiz	Institute of Education, University of London
Robert Wagenaar	University of Groningen

This *Handbook* is the product of a two-year project, *Benchmarking in European Higher Education*. This project has been funded with support from the European Commission. Its content reflects the views only of the authors and the Commission cannot be held responsible for any use which may be made of the information contained therein.

November 2010 – ISBN/EAN 978-90-8164070-1

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Contact

Nadine Burquel

Secretary-General

European Centre for Strategic Management of Universities (ESMU)

Rue Montoyer 31

1000 Brussels

www.education-benchmarking.org

E-mail: benchmarking@esmu.be

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FOREWORD

I am delighted with this *University Benchmarking Handbook* which is one of the main outcomes of our second two-year EU-funded project *Benchmarking in European Higher Education*. This *Handbook* is the result of the significant work carried out between the four project partners: ESMU, the European Centre for Strategic Management of Universities, project leader; CHE Consult, Centre for Higher Education Development; ICHM, the International Centre for Higher Education Management, University of Bath and the IoE, the Institute of Education, University of London and over forty European universities, which joined the four pilot benchmarking groups on university-enterprise cooperation, governance, lifelong learning (continuous professional development) and curriculum reforms.

I believe that with this *Handbook* we have made significant progress in developing a rigorous and sophisticated approach to carrying out effective collaborative benchmarking exercises in European higher education. I would like to thank the project team and all those who were involved for their valuable contributions.

In 2008, we published a **Practical guide on Benchmarking in European Higher Education** in the framework of our first EU-funded project on the topic. This guide investigated the concepts and practices of benchmarking in higher education, with a specific focus on collaborative benchmarking exercises. In addition, the project resulted in an extensive review of the literature (available online), a report on the project findings, a website (www.education-benchmarking.org) as a central place for information, an online tool and guidelines for effective benchmarking.

Benchmarking originated in the private sector in a context of severe financial and competitive pressures when Xerox Corporation first started to use benchmarking in 1979. Looking at what competitors were doing led to major changes internally in order to improve processes and enabled the company to gradually regain its market position. In the public sector, benchmarking is now also used extensively to increase the performance of public services. Some implicit forms of benchmarking have always been part of higher education but what is new today is the use of explicit benchmarking and the formalisation of processes, which this *Handbook* also aims to address.

Higher education institutions are increasingly operating in competitive environments and many institutions are currently heavily affected by the economic recession, its social consequences and cuts in public expenditure. Yet at the same time universities are having to deal with an increasingly diverse student population with different needs, more demands to deliver excellence in research and education, and to demonstrate their contribution to society. In this context, improving university performance and strategic profiling are crucial to demonstrate institutional accountability for the use of public funding, quality of education and research, and contribution to economic growth.

At the level of the European Union, the EU2020 Strategy and the Education and Training 2020 Agenda call for higher education institutions to be the key drivers in the development of a powerful innovative, sustainable and competitive knowledge society. European higher education is characterised by its broad diversity which is a great strength in terms of the many opportunities this provides to address the needs of the labour market, social cohesion and regional specialisation in an efficient way. Yet European higher education is currently underperforming. It is overregulated, fragmented and under-funded and without significant modernisation and reforms at sector and institutional level, it will not be able to play a key role in driving these crucial changes.

In this context benchmarking is a powerful modern management tool which, through self-assessment and a structured comparative institutional learning approach, provides higher education institutions with crucial information to increase the quality of their institutional development and their strategic performance.

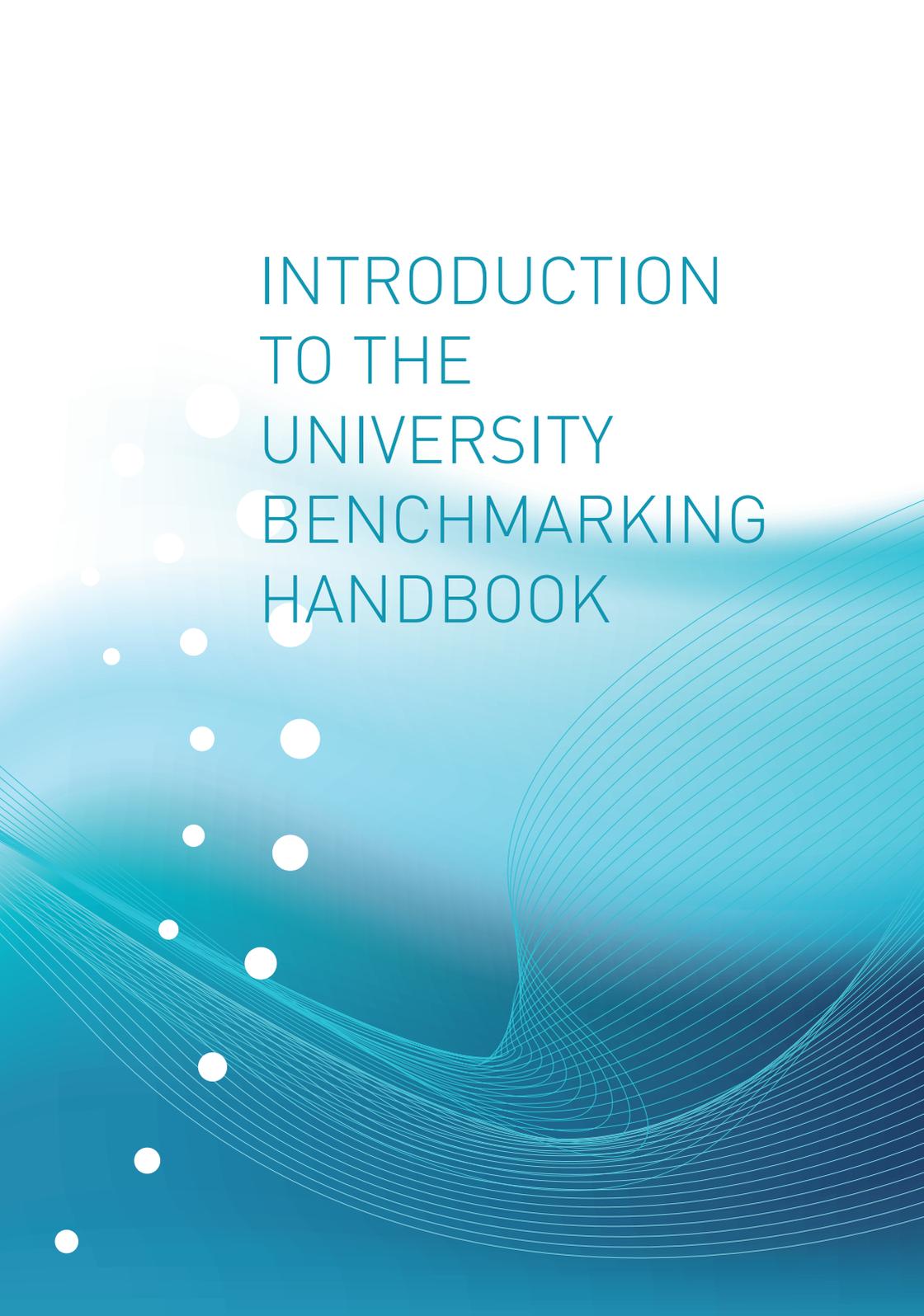
By making the strategic senior level decision to commit to undertaking a benchmarking exercise, higher education institutions carry out a diagnosis of their institutional strengths and weaknesses which leads to the definition of institutional priorities and specific targets. This in turn demands a balanced choice of appropriate indicators relevant to the focus of the benchmarking exercise. Based on our significant experience with benchmarking exercises, our *Handbook* provides ample advice on how to operate such choices in a most effective way.

We have seen many examples of benchmarking exercises which stop with the next steps of data collection and reporting of the results, instead of moving to the implementation of an action plan and the monitoring of performance improvement which concludes the benchmarking cycle. The *Handbook* provides detailed guidelines to carry out this step effectively.

We hope that this *Handbook* will prove a valuable tool for higher education institutions to enhance the use of benchmarking in a most effective way, to improve their overall performance and to profile themselves much more strategically in increasingly competitive environments.

Frans van Vught
ESMU President



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INTRODUCTION TO THE UNIVERSITY BENCHMARKING HANDBOOK

1. INTRODUCTION TO THE UNIVERSITY BENCHMARKING HANDBOOK

1.1 AN INTRODUCTION TO UNIVERSITY BENCHMARKING

The world of higher education is changing rapidly bringing new challenges for universities and colleges seeking to adapt to this new world. This creates a great deal of uncertainty for higher education institutions (HEIs) in seeking to respond to these changes, uncertainty about the new environment, about the choices available, about appropriate strategies and about the effectiveness of the responses which managers ultimately choose. University benchmarking is an attempt to deal with this uncertainty, and give policy makers and HEI senior managers a toolkit to help ensure that their strategic decision-making process is as rational as possible.

University benchmarking is a concept adopted from industry, where it has been used in manufacturing and services with great success for over two decades. University benchmarking, however, is currently at an early stage in its development, and there are many misconceptions about its purpose, value, potential and limitations as a guide to improve university strategic management. The purpose of this *Benchmarking Handbook* is therefore two-fold. Firstly, it seeks to set out the current state-of-the-art in university benchmarking which can be drawn on by universities as they implement this valuable tool to improve their overall performance and strategic management. Secondly, it is to encourage the development of the principles and practice of university benchmarking, to stimulate the refinement and perfection of these tools through their repeated application.

The report is published by the European Centre for the Strategic Management of Universities (ESMU), based in Brussels, Belgium, which has been actively involved in the last five years in a series of projects seeking to develop and refine university benchmarking tools in the European context. In 2008, ESMU published *A Practical Guide to University Benchmarking* (the "Practical Guide") which presented an overview of benchmarking approaches in use in higher education at that time. That was based on the results of a European Commission funded project "Benchmarking in European Higher Education". The publication set out a framework for benchmarking universities based on a first phase in which a desk survey of

benchmarking approaches was validated against user groups, as well as the *Practical Guide*.

The *Practical Guide* developed a generic benchmarking methodology on the basis of approaches then in use. From 2008, that methodology has been tested in a pilot project, (“the second phase”), and the generic benchmarking methodology has been refined into a more systematic approach that can be applied in a range of circumstances to help universities interpret their performance in a timely and accurate way to feed into the strategic development of particular institutions.

The *Benchmarking Handbook* does not pretend to be the last word on university benchmarking. The emphasis placed by the European Commission alongside a number of Member States on benchmarking as a tool for university improvement means that benchmarking is likely to become increasingly important into the future. However, the value of benchmarking can only be realised through its sensible implementation reflecting a growing understanding of how to apply its principles in an extremely diverse set of national higher education systems. We hope this book will provide potential benchmarkers with the confidence to begin the learning journey, the tools to help institutions as they learn about university benchmarking, and an enthusiasm to report their own experiences in the future.

1.2 UNIVERSITY BENCHMARKING IN THE CONTEXT OF HIGHER EDUCATION REFORM

There is an increasing consensus that university benchmarking is an important instrument in helping to make higher education fit for the 21st century, and to maximise the contribution which universities and colleges make to their host societies and economies. The Commission's view is that more funds need to be invested in higher education to increase the competitiveness and quality of life of Europe, and reform is necessary to ensure that those funds are spent as efficiently and effectively as possible as well as to attract the necessary private investment into the sector to complement public expenditure.

The European Commission has long emphasised the importance of this higher education reform process, which has encompassed a number of distinct strands. The most visible of these is perhaps the Bologna process, which has sought to harmonise higher education systems and pathways across the 27 EU member states as well as through the wider membership of the European Council. Reform also encompasses changes to university governance structure, providing them with the necessary autonomy and strategic management to respond to the contemporary challenges, alongside funding, ensuring that public funding encourages higher education to more closely service public policy goals, and increasing opportunities for universities to attract a more diverse mix of funding to support investment in a competitive knowledge economy.

This large-scale change process creates an extremely dynamic and volatile environment, with policy-makers and universities seeking to reform the structures, laws and administration through which higher education is developed, as well as innovating within institutions to create the best possible outcomes in higher education. But how can progress towards delivery of this broad agenda be judged? On the one hand, there are a series of tangible and high-level targets and milestones for member states and the EU as a whole, for example that EU member states invest 2% of GDP in higher education, or that the Bologna Process is completely implemented within Member States. On the other hand, there is clearly a role for ongoing evaluation and

monitoring of performance, stimulation of learning by policy-makers, identification of best practice and sharing of lessons between governments and HEIs.

This latter area involves using a range of techniques and tools which seek to evaluate performance and progress along a journey where the final destination is not yet clear. A key purpose of evaluation is in making sense of both the journey and what that final destination might be, understanding what has been achieved, the problems and barriers in making reforms, and understanding which might be sensible long-term targets for a European higher education system-of-systems. Within this, we see that league tables and rankings have become increasingly popular as a means to give universities feedback on their own relative performance as against other similar institutions. Research, Technology Development and Innovation Scoreboards have also been developed as a means of understanding and comparing national policies and performance in terms of technology and innovation, including as part of that, an analysis of universities' contributions to national economic performance and productivity growth.

Benchmarking has emerged as another complementary approach to contribute to making sense of how European universities are progressing towards being autonomous and competitive institutions which use public funds effectively and efficiently and optimise their wider societal contributions economically, socially, politically and culturally. Indeed, within the Commission's Europe 2020 strategy, the ambition is articulated for benchmarking to have a pre-eminent role in understanding the interim progress made in higher education reform, both between member states and their HEIs, as well as within the wider global environment.

“To step up the modernisation agenda of higher education (curricula, governance and financing) including by benchmarking university performance and educational outcomes in a global context” (CEC, 2010, p. 11).

However, university benchmarking is a relatively novel technique and it can be a confusing field for those seeking to apply the approach for the first time. Benchmarking is a tool developed and popularised within industry, to reduce the variability of activities undertaken by a firm that reduce its reliability and quality. The idea is to improve those processes by eliminating irregularity

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and uncertainty. Benchmarking works by identifying where variability in processes is a consequence of the way that the organisation chooses to manage the task and those which are a consequence of random variation in the external environment. Performance can be improved by eliminating variability caused by poor internal management, and the adoption of processes which are optimised for dealing with external variations.

Benchmarking is a comparative improvement process, and works by comparing one's own organisation with other organisations operating in a similar kind of environment – who therefore face the same kind of external variations and uncertainties. A benchmarking process is a comparison of a group of comparators, all of whom face similar kinds of uncertainties. What is compared is the performance of the group in the face of these uncertainties, and the best performance suggests what the best performance can be achieved given the external variations. The first step of benchmarking is in providing institutions with an ambition for improvement, to look at a set of comparators and acknowledge that they could be managed more effectively and deliver higher quality outputs because there are other similar organisations that achieve more impressive outcomes.

A second stage of benchmarking is in better understanding why the best performance, 'the benchmark', works better, and comparing the processes by which the various organisations deliver the particular outcomes. Comparing processes allows those organisations which do not deliver the best practice performance to identify where they are underperforming, and to diagnose where the strategic focus for improvement should lie.

The third stage of benchmarking is in responding to the diagnosis of the problem and developing a strategy for organisational improvement. In the first two stages of the benchmarking process, all the comparator organisations should each have learned more about the particular processes that they are seeking to improve. The diagnosis gives an indication of where improvements need to be made. The benchmark is a model for how an effective system could be organised, or an example of how good practise is already operating in practice. However, it does not provide a simple recipe for performance improvement, and the key to a successful organisational improvement strategy is self-awareness. Organisations need to understand what

their strengths are and how these strengths can be capitalised upon, as well as addressing weaknesses, to deliver an overall performance improvement. Benchmarking is a process-driven approach, understanding the processes through which organisations deliver outputs which serve customer, client or stakeholder needs, modelling those processes, measuring them and comparing them effectively within a sensible comparator group. Modelling and measuring university processes is an extremely tricky business. Without sufficient thought, there is the risk of simply comparing what can be measured and producing league tables, rather than identifying areas for strategic university improvement (Garlick and Pryor, 2004).

This *Handbook* takes our understanding of benchmarking to a further level, based on the pilot project Benchmarking in European Higher Education, which ran from 2008-2010. This *Handbook* sets out findings drawn from that pilot project, in which four benchmarking groups were established and benchmarked according to the procedures in the *Practical Guide*. This provided a fertile laboratory to refine and improve the framework in the *Practical Guide*. This *Handbook* draws on the diverse experiences to provide further insights to universities seeking to use this powerful tool to improve their own strategic management.

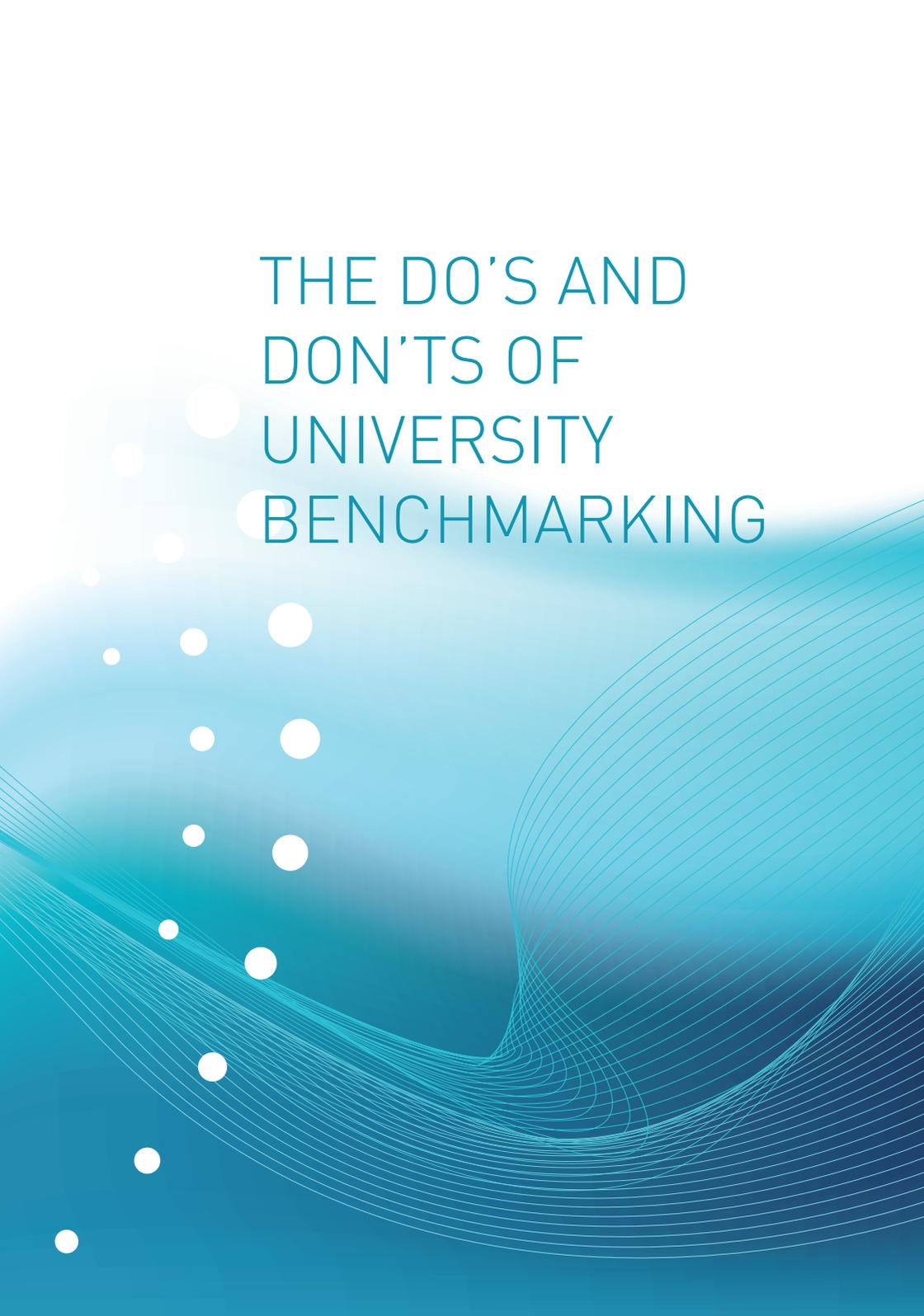
When we talk here about university benchmarking, we acknowledge that benchmarking approaches are restricted because of the infancy of university benchmarking. There are no available datasets of performance and practice against which to benchmark a single institution. For pragmatic reasons, university benchmarking currently has to be undertaken against a comparator group which are assembled specifically for the purpose of an individual benchmarking activity. As the field of university benchmarking grows, we expect that it will be possible to undertake more sophisticated and more individualised university benchmarking. However, for the purposes of this *Handbook*, we are clear that we are concerned with collaborative, trans-institutional benchmarking (more information on types of benchmarking are available in the *Practical Guide*).

This report is divided into four sections. The first section provides an introduction to university benchmarking including some of the 'dos and don'ts of good university benchmarking'. The second section provides some more

INTRODUCTION TO THE UNIVERSITY BENCHMARKING HANDBOOK

detailed information about the Benchmarking in European Higher project as a context for the findings presented later. The third section provides a conceptual explanation of benchmarking as a performance improvement technique in general, and the specifics of its application to universities. The final section breaks benchmarking down into 15 steps, and for each of those steps gives a stylised step-by-step guide of how to make benchmarking work for you. There is also an afterword which provides references, a glossary of benchmarking terminology and advice on the use of data in benchmarking.



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THE DO'S AND DON'TS OF UNIVERSITY BENCHMARKING

2. THE DO'S AND DON'TS OF UNIVERSITY BENCHMARKING

2.1 FIVE TOP TIPS FOR GOOD BENCHMARKING

2.1.1 BENCHMARKING MEANS UNDERSTANDING THE PROCESS: DATA GATHERING IS SECONDARY

The essence of a good benchmarking process is institutional learning; learning about how what the university does relates to the wider environment and stakeholder set. Data gathering is a very small element of this activity, which takes place later on in the benchmarking activity, once the key processes are understood. This better understanding is the critical outcome from the process and what makes benchmarking worthwhile from an institutional perspective. A collaborative benchmarking process involves a considerable degree of effort from the participants, and it is necessary to spend sufficient time ensuring that the benchmarking process is going in the right direction before it is possible or worthwhile to gather data on institutional performance.

2.1.2 BENCHMARKING MEANS RELYING ON HAVING A PEER GROUP WITH A SHARED STRATEGIC INTEREST

Benchmarking is a collective process in which institutions learn from one another. Some of that learning is about comparing practices, identifying and exchanging good practices. But another important element of the collective learning is in better understanding how universities tasks translate into wider outputs which are valued by a particular client or stakeholder group. For that learning to be possible, it is necessary to have a dialogue between committed and self-critical institutions who really want to learn and improve their practice. This means that all the participants in the collaborative benchmarking exercise need to really believe that the benchmarking exercise is worth the cost and the effort because it will help them to improve their overall strategic performance. If you are not committed to improvement, then you owe it to the comparators not to waste their time by getting involved and then falling out when the going gets tough.

2.1.3 BENCHMARKING MEANS GETTING THE BEST OUT OF ALL GROUP MEMBERS

In a collaborative benchmarking exercise, there is likely to be a wide mix of institutions. Part of the diversity will come in having different kinds of institutions simultaneously, from different national contexts, generalist institutions alongside specialist disciplinary institutions, research-intensive universities alongside universities of applied science and specialist colleges. A second element of the diversity is that there will be a diverse level of experience in managing and dealing with the strategic issue. Getting the best out of the benchmarking exercise means ensuring all the group members can effectively participate. For less experienced members, this may involve hearing about how other institutions organise their practice and hearing from experts in the field of institutional management before they are able to articulate a clear strategic interest in the benchmarking. In highly diverse groups, this may mean focusing benchmarking on a few particular priorities which are shared by all the groups, but are also a basis for agreement to allow activity to proceed.

2.1.4 BENCHMARKING MEANS THINKING ABOUT WHAT KIND OF INSTITUTION YOU WANT TO BE

Benchmarking is a technique which can be used to improve institutional performance, by identifying who performs better than you, understanding why they perform better than you, and improving your processes to improve your own performance. Benchmarking is therefore a tool which helps institutions to change, but it can only work effectively if the organisation benchmarking itself is committed to that change, and is clear that that change is compatible with the institution's culture. Throughout the process, institutions have to ensure that the benchmarking process is working towards helping them realise a change process towards a desired end goal. It is necessary at the start to have a set of fundamentals which can help to guide the decision-making on a routine basis and help to ensure that benchmarking delivers effective organisational improvement.

THE DO'S AND DON'TS OF UNIVERSITY BENCHMARKING

2.1.5 BENCHMARKING MEANS GIVING YOU THE TOOLS FOR GREATER INSTITUTIONAL SELF-AWARENESS

Benchmarking is a medicine that can taste nasty! By saying you want to compare yourself with the best, you are far more likely to discover that you are not the best. Even if you are the best, you are likely to identify things that can be done better or you might realise that you are only the best in the chosen group but using external benchmarks tells you that you are quite behind a regional or world standard. This criticism provides insights which can be used to improve institutional performance. But to be effective, institutions have to be willing to hear criticism and to persevere with a benchmarking exercise that is demanding and challenging internally, and bringing potentially unwelcome messages to those that commissioned it. Institutions need to have a degree of security about the implications of this, and be confident that their willingness to challenge themselves to improve their performance is a good sign that they can deliver institutional improvement.

2.2 FIVE THINGS TO AVOID IN UNIVERSITY BENCHMARKING

2.2.1 BENCHMARKING DOES NOT REPLACE RATIONAL THINKING

Benchmarking is an institutional improvement technique; it is not a black-box technology or method which can be brought into a particular situation and which produces clear-cut messages about how an institution performs and what its strategic challenges are. Benchmarking as a technique attempts to provide both information about institutional performance, but also to give managers some perspective and context for that performance information. The success of a benchmarking exercise ultimately comes down to the capability of managers to use that information to better understand their institutional situation and produce an agenda for strategic institutional change. Benchmarking can help managers to learn about their institution, what is possible and what is being done elsewhere, but it is managers' responsibilities to join up those various lessons into an action plan that makes sense in the wider institutional context.

2.2.2 BENCHMARKING IS NOT AN END IN ITSELF

Benchmarking is a technique. Think of it as building a bridge over a river – you can have a cantilever bridge, a rope bridge, a suspension bridge or a simple beam bridge: these are all different techniques for bridge building. But what is important about the bridge is not the technique, but the fact that it crosses an obstacle and allows a path to continue unbroken. What is important about benchmarking is that it helps institutions to improve their own performance by better understanding what they could achieve; other techniques are available for institutional improvement, and you need the technique that best meets your needs. You can build the most impressive suspension bridge in the world, but if you don't have a huge gorge or river you want to cross, then you've just wasted time, effort and money. The same is true for benchmarking – if you are not committed to improving your institution, then a benchmarking exercise is potentially going to be extremely wasteful, and worse, it will make everyone cynical the next time you want to use benchmarking and it might actually be of value.

THE DO'S AND DON'TS OF UNIVERSITY BENCHMARKING

2.2.3 RUSHING INTO DATA GATHERING CAN PREVENT THE VITAL LEARNING PROCESSES

Data is a critical element of a benchmarking process. But data is information plus context. The context for information is the processes that you want to understand. If you don't understand the processes you want to measure, then any data you gather runs the risk of being irrelevant or even downright misleading. There can be a huge rush to want to gather data because it seems like the scientific or objective element of the benchmarking exercise. But if you gather information about performance before you understand what performance you want to measure, then you are just gathering noise. It's like orienteering – you need to run quickly at some point to win, but if you set off running before you've read the map, then you are only going to make the job more difficult, slow yourself down and tire yourself out. Likewise, champion benchmarkers are the ones who take the time to learn about their processes and think through how these processes can be measured, and come up with sensible comparative criteria, rather than just gathering easily available data and drawing up league tables between the comparators.

2.2.4 FOCUSING ON QUANTITATIVE DATA RISKS LOSING THE BIGGER PICTURE

One of the attractions of benchmarking is that it provides a degree of objectivity by comparing HEIs against comparable institutions. Comparison needs to be made on an objective basis for benchmarking to be effective. That does not mean that exclusively quantitative data can be used in a benchmarking exercise. The advantage of quantitative data is that it seems clear and unambiguous. But different institutions and countries can gather different ways, which can mean that data is incompatible, which reduces the certainty, and the effectiveness of the comparison process. What needs to be compared is performance and process, and evidence presented for the level of performance and the nature of the organisation.

In an ideal situation, a university will be able to say after benchmarking "my performance is at this level, better than these institutions (A, B, C) but not as good as these institutions (D, E, F). I know this because of this evidence we have gathered: we do these things, we achieve these outputs, we have these strategies, we have this external involvement. This means I can be certain that our performance is at this level".

A fixation on numerical data focuses exercises on what can be measured by universities (and increases reliance on all partners being able to measure that data) and quickly reduces benchmarking to a series of high-level widely available variables that provide no information about the detailed processes with which the benchmarking exercise is concerned.

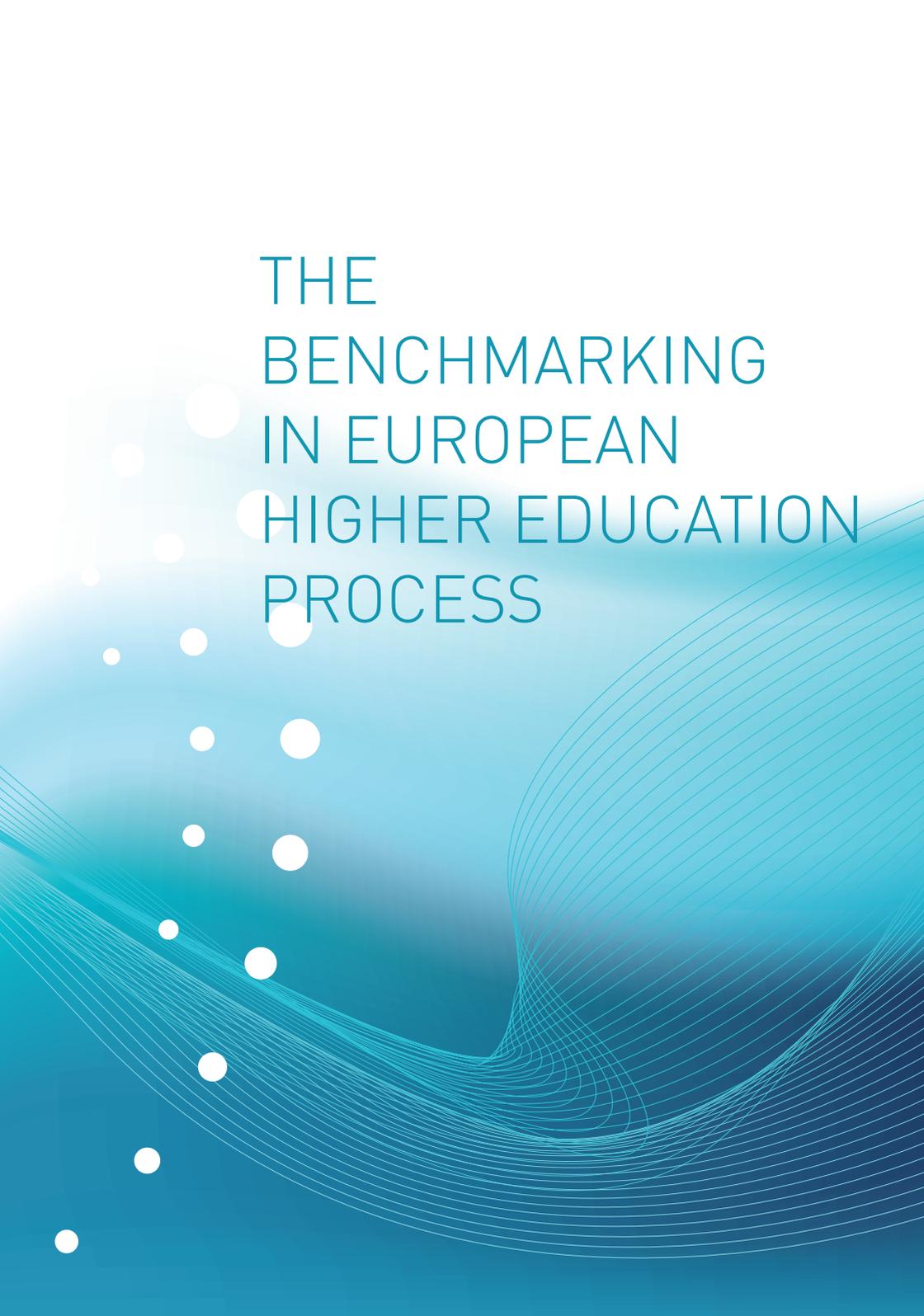
2.2.5 BENCHMARKING DOES NOT PROVIDE LEAGUE TABLES

One outcome of a benchmarking process is never going to be that your university website homepage can have a banner 'Best of Breed' on display; that's not how benchmarking works. You should understand and accept that before you start, otherwise you are wasting everyone's time, yourself included. In collaborative benchmarking, a comparator group is necessarily a pragmatic construct, drawn from institutions that have a shared interest in a common topic area, but are from very different national systems, and are likely to represent very different kinds of institution.

In the University-Enterprise Cooperation Group, the ten participants included big business-facing universities, long-established and leading national research universities, two independent technological faculties within institutions, a small technology college and a university of applied science in the process of an institutional merger, drawn from eight countries. Given such institutional diversity, it is completely impossible to rank them or their performance – what happened was that the group defined what their interest was – in building strategic links with business that helped increase overall business engagement over time, and then measure the distance of each institution from that ideal 'benchmark'.

It might be tempting to draw up a league table or ranking based on the comparative distance of each from the benchmark, but given the huge national and institutional differences, a league table would have made no sense. Even worse, drawing up a league table would have undermined the sense of collaboration between institutions which was vital to successfully completing of the benchmarking process.



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THE BENCHMARKING IN EUROPEAN HIGHER EDUCATION PROCESS

3. THE BENCHMARKING IN EUROPEAN HIGHER EDUCATION PROCESS

This *Handbook* reports the practical lessons learned from the second phase of the European Commission funded project, Benchmarking in European Higher Education. The whole project has been concerned with the improvement of university benchmarking as a vital tool for consolidating the university reform process currently underway across Europe. The project was developed because of concerns over the lack of substantive understanding of HEI benchmarking as well as with the inapplicability of existing benchmarking tools to the HEI sector. The long term vision for Benchmarking in European Higher Education has been to create a platform for university benchmarking as a means of implementing benchmarking effectively within the strategic reform of HEIs. There have currently been two project phases, the first phase which sought to better delineate the problem and develop concepts specific to university benchmarking. The second phase sought to test and refine these concepts in practice, using four university benchmarking groups, to explore the applicability and value of the benchmarking process.

3.1 BENCHMARKING IN EUROPEAN HIGHER EDUCATION: PHASE I

The project as a whole began at a time when the European Council had expressed its desire for an acceleration and consolidation of the reform of European higher education institutions. At the same time, there was a concern that European universities themselves lacked the capacity to take responsibility and ownership of this challenge, and to ensure that the reforms strengthened individual institutions, national systems and the European higher education area. The challenge has been to embed strategic management practices within HEIs, so that universities themselves define their responses to the broad challenges which have necessitated those reforms, and build on their own strengths in creating a response to those challenges. The Benchmarking in European Higher Education project sought therefore to assist universities in developing an orientation towards strategic improvement.

The first phase of this project ran from 2006 to 2008 and sought to understand the boundary conditions for effective university benchmarking. The first part of the project was a review of the literature of university benchmarking, and exploration of 18 university benchmarking exercises to develop a synthetic benchmarking model. The literature review and synthesis were then tested through a series of expert events, including a Symposium in November 2007 and three practical workshops in Spring 2008, which tested the model with reference to three domain areas, namely research, internationalisation and internal quality. These helped to strengthen an understanding of why benchmarking might help particular institutions as well as contribute to the EU reform process. The first phase of Benchmarking in European Higher Education produced a number of outputs which are available through the project website (<http://www.education-benchmarking.org/>):

- An online tool with examples, advice and an online bibliography
- A *Practical Guide* with a review of the literature and a step by step approach to benchmarking
- A report of extensive desk research carried out on benchmarking in higher education
- Guidelines for good practices for effective benchmarking
- An ongoing platform to promote exchange and good practices for benchmarking in higher education

3.2 BENCHMARKING IN EUROPEAN HIGHER EDUCATION PHASE II: A PILOT PROJECT IN UNIVERSITY BENCHMARKING

The events of late 2007 and early 2008 indicated a clear desire amongst a number of universities to take the concepts developed in the first project phase further. The second project phase was developed to test the principles and models in practice, through a series of collaborative benchmarking groups. Four areas of interest were identified, and universities were recruited to participate in the groups, which covered areas identified to be of importance to the wider reform agenda:

- **Governance (GOV):** focusing on the systems and procedures under which organisations are directed and controlled, critically ensuring involvement of stakeholders, decision-making processes, information and communication and clear tasks and responsibilities
- **University-Enterprise Cooperation (UEC):** focusing on joint partnership strategies, more active participation in knowledge exchange for better collection of data.
- **Curriculum Reform (CR):** focusing on national context, institutional context, level of implementation of the Bologna Process, curricula development process, assessment and quality assurance, internationalisation, role of stakeholders, curricular structure, and learning outcomes.
- **Lifelong Learning (LL):** focusing on continuing professional development (CPD), access and transition, institutional strategic for lifelong learning, and collaboration with enterprises and organisations.

The second phase of Benchmarking in European Higher Education was a pilot project where these four groups came together five times in the life of the project to take collective decisions. The five meetings corresponded to five anticipated steps in the benchmarking process.

- Definition of indicators (Ghent, Belgium, April 2009)
- First analysis of indicators, identifying institutional priorities and targets (Berlin, Germany, September 2009)
- Finalising priorities and targets, identifying focus areas for action plans (Bath, United Kingdom, November 2009)
- Developing an effective and implementable action plan (Elche, Spain, February 2010)
- Reporting back on progress in the groups and action plan

The second phase also involved intensive work in between the workshops for the participating universities, as well as external verification of their work by experts. Each of the four groups had an attached expert with acknowledged expertise in the field under consideration who was able to comment on the choice of indicators, their interpretation by the institutions, and the action plans developed in response. The four main tasks in between these five project meetings were:

- Completing the online questionnaire and gathering data from within the institution to 'score' the institutional performance
- Working with senior management on developing action plans that addressed weaknesses but fitted with existing strategic interests
- Drafting and revising the action plans in response to comments from the benchmarking groups and the experts
- Attempting the first steps of the action plans in the time available



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4. THE THEORY OF BENCHMARKING

Benchmarking is a performance improvement technique which helps to give certainty to managers attempting to draw up strategies for change in very confusing and unpredictable external environments.

Benchmarking deals with external uncertainty by looking at what other organisations are doing, and identifying good organisational practice to give a sense of what is achievable despite the uncertainty. This in turn can be used to indicate the kinds of changes which should be prioritised by the institution to give the greatest institutional improvements as against the least disruption and effort. Although originally derived from manufacturing management, ideas around benchmarking have recently been extended and refined into commercial and public services contexts. There is no reason why universities could not benefit as other sectors have done from using benchmarking to develop a better understanding of quality, excellence and strategic improvement within HEIs.

However, those tools need careful and reflective application in different kinds of contexts to ensure that the messages that they produce are effectively geared towards performance improvement. The *Practical Guide* went into the history and background to benchmarking in general at great length, and still provides a good grounding for those who wish to understand more about these topics. What it was not able to do effectively was to illustrate how those principles have to be to be successfully applied to higher education, which is the focus of this *Handbook*. This chapter therefore focuses on the fundamentals of benchmarking as applied to higher education institutions in general to provide a solid conceptual basis for the more practical lessons presented later in the *Handbook*.

4.1 INTRODUCTION TO BENCHMARKING: A REPRISE

The definition of Benchmarking presented in the *Practical Guide* provides a good starting point for our discussion of its practical implementation in this *Handbook*. The Practical Guide defines benchmarking in the most general terms as

“an internal organisational process which aims to improve the organisation’s performance by learning about possible improvements of its primary and support processes by looking at those processes in other better-performing industries”.

Although this is an extremely general definition of benchmarking, it does highlight four of the key elements which comprise a successful benchmarking process, and which are as applicable to university benchmarking as they are to other benchmarking sectors

Internal: benchmarking is an activity that is undertaken by an organisation to generate information which can be used within the organisation, generally as part of the organisation’s strategic management processes.

Performance improvement: benchmarking generates information which an organisation can use as part of efforts to do what it does, better.

Learning: benchmarking is a human process in which managers learn about their organisation, its processes, how other comparable organisations arrange those processes, and how those processes might therefore be better organised.

Looking elsewhere: benchmarking uses examples drawn from elsewhere, and so those using those examples have to be clear that there are sensible reasons as to why these external examples are sensible comparators for the organisation under consideration.

Benchmarking is typically used in very uncertain and volatile environments. In these situations, it is very difficult to make an informed decision about change. On the one hand, there can be a strong tendency to resist change because there are so many potential options. On the other hand, someone

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persuaded of the need to change is faced with a complex array of choices and runs the risk of choosing a change because it is a change, rather than it is the right change. What benchmarking does is to help a manager build certainty about organisational performance through making well-judged and useful comparisons with elsewhere.

In the context of manufacturing, a typical uncertainty and volatility arises from variations and fluctuations within the process. Variation can arise from many sources, externally and internally, can be structural, cyclical or random, and it can be incremental or qualitative in nature, as well as result in faulty products or reduced producing. Some elements of variation may be under the control of an organisation, whilst others may not.

In a factory with a production line assembling goods, the limits on absolute manufacturing capacity are determined by the arrival of supplies to the factory, their movement to the assembly line the presence of sufficient capacity to assemble them into a product, and the logistic capacity to dispatch them to customers and invoice for those sales. The absolute output is affected by the arrival of those supplies, the internal logistics of the factory, and the human resources organisation of the factory. If one particular supply is late in arriving, then that can block the flow of the production system. Building up stocks of the supply – which can buffer delays from suppliers – is expensive.

The art of management is therefore designing a system which minimises avoidable fluctuations and creates flexibility to minimise the impact of unavoidable fluctuations. The idea of lean manufacturing emerged as the organisational principal for efficient factories: a single controlling supplier develops stringent contracts with its suppliers which incentivise them to ensure 100% supply provision, to guarantee 100% fault-free supply and to eliminate external fluctuations. At the same time, lean manufacturing seeks to minimise internal faults by drawing on the skills and expertise of all its employees to identify where faults arise that lead to goods having to be reworked or returned.

But there is a problem in seeking to improve performance, in that 100% performance is not possible, and there will always be some variation. This raises a number of questions for managers:

- How much variation is acceptable and desirable?
- How much further is it possible to go and improve the organisational performance?
- What would the maximum possible performance look like?
- How far is the organisation away from obtaining that optimum performance?

Benchmarking is a tool that is specifically directed to answering these questions. Benchmarking works by looking at comparable organisations with similar processes and examining the performance levels they are able to obtain. Rather than beginning from all the different variations and whether they can be controlled or not, benchmarking starts from the opposite end of the spectrum, considering that external and uncontrollable factors will impact on different organisations in similar ways.

Where is there too much variation in performance that suggests that the process is poorly managed by the particular organisation concerned. The so-called six-sigma principle is that the ideal for optimising any manufacturing process is that the level of faults should be at least six standard deviations (sigma being the mathematical symbol for standard deviation) below the 'natural' mean for the process. This six-sigma point is the point at which managers can be satisfied that the level of faults are so low that everything possible has been done to reduce fluctuations. Monitoring fault levels continuously gives managers the confidence that their management processes are working effectively, whilst rising fault levels above the tolerance are a signal to managers that there are problems that need addressing.

More generally, benchmarking seeks to create a decision-rule for what counts as good performance in a process, then gathering evidence to look at how the organisation, and other comparable organisations perform in terms of that process. If the organisation's performance is well below what might be expected, then this is a signal – as will the six sigma rule - that there are problems that need addressing. Benchmarking can also help to identify good practices that might solve those problems, but the fundamental challenge in benchmarking is **creating a decision rule that there are problems that need addressing.**

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Effective benchmarking therefore considers an underlying business process, which takes a set of inputs, and transforms them into a set of outputs, which in turn produces outcomes which are desirable for stakeholders. In benchmarking, it can be tempting only to consider the narrow process element completely under the institutional control, or the inputs, process and outputs narrowly defined. But effective performance improvement involves considering the variability of processes from beginning until end, the capacity to deal with and respond to external environmental pressures as well as internal management issues. This is full cycle benchmarking, and its scope is shown in figure 1 below.

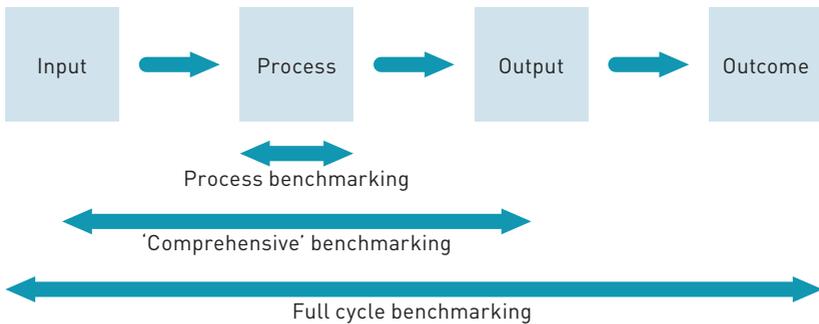


Figure 1 A process perspective on benchmarking

Benchmarking works by using differences in performance within similar environment to be suggestive of the fact that those performance differences can be explained in terms of internal differences in the way those organisations arrange their processes. The essential trick in benchmarking is to identify the **decision-rule** in the process that something needs to be addressed.

The corollary of that is that the best performance that can be achieved will be achieved by the best managed organisation in the sample. That best performer is then 'the benchmark' against which others can be compared. Best practice transfer – learning to improve the process – can involve using the performance measures to identify best performances, and seek to learn how those best performers achieve those outcomes.

The six sigma rule is a relatively simple decision-rule – any performance below six standard deviations is suboptimal. When dealing with more complex organisations it is best to have a decision rule that gives a more nuanced outcome. One approach – used for example in Charles and Benneworth, which was also adopted partly in the second phase of the project – is to consider performance as a set of sophistication levels, with clear qualitative differences between them. A common segmentation is to divide four levels of performance, illustrated in figure 2 below:

- **Basic:** this is the kind of performance which is typically achieved when a process is carried out unselfconsciously or is not managed
- **Satisfactory:** this is the kind of performance which is typically achieved when a process is managed through the application of an off-the-shelf performance management system
- **Good:** this is the kind of performance which is typically achieved when a process is managed with a performance management system that effectively recognises the organisational context and culture, and is more than off-the-shelf
- **Excellent:** this is the kind of performance which is achieved when a process is managed with a system that reflects the organisational culture, differences within units and even teams within the organisation, and uses performance management to play to strengths and address weaknesses, giving a performance approaching ‘world class’

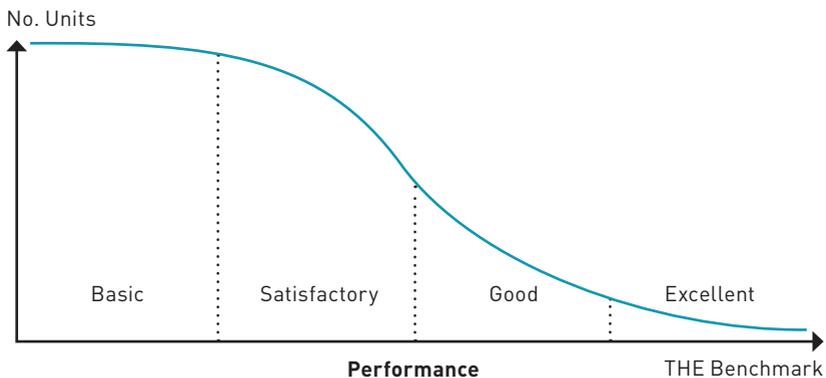


Figure 2 Sophistication levels in benchmarking aggregate performance along with the extent to which the process is under control.

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Figure 2 also shows one additional performance level besides the four sophistication levels. The best performance which it is possible to achieve is 'the benchmark', which is a standard against which all other organisations will have to be adjudged. It is useful here to make a distinction between the **benchmark** and **benchmarking**, which we use throughout the rest of the document.

- The benchmark is the best performance that can be achieved within a given organisational environment, which in the course of a benchmarking exercise is the best performance agreed by a peer group
- Benchmarking is a process whereby an organisation gathers data on its own performance and compares that against the best performance, (the benchmark)

Benchmarking gives an organisation a coherent and reasoned understanding of how their current performance rates against what is conceivable given the external variation and variables which they cannot hope to influence. The division into levels provides a sense of the degree of progress still to be made by the particular organisation in seeking to aspire to perform at the level of the benchmark. The key to effective benchmarking is to gather the data that allows an organisation to be certain as to at which level they perform.

An important part of effective benchmarking is an institutional commitment within an organisation that there will also be improvement, and that the knowledge created about the comparative organisational performance forms part of a cycle of improvement. The real value to an organisation of benchmarking comes through this learning process. By better understanding how effective are the organisation's processes as against what it is possible to achieve, managers are therefore empowered to identify areas where there are problems and to work with their employees to identify solutions to those problems.

Figure 3 below shows how benchmarking can be used in practice by organisations at differing sophistication levels. In a benchmarking process, an organisation identifies where it is located on the performance spectrum. This is shown by the circles. The organisation then sets a goal for improvement (the crosses), and then develops a strategic action plan to achieve that

particular goal (the arrows). When the action plan has been achieved and the organisation believes performance has been improved, a new benchmarking exercise can indicate whether there has been a genuine performance improvement.

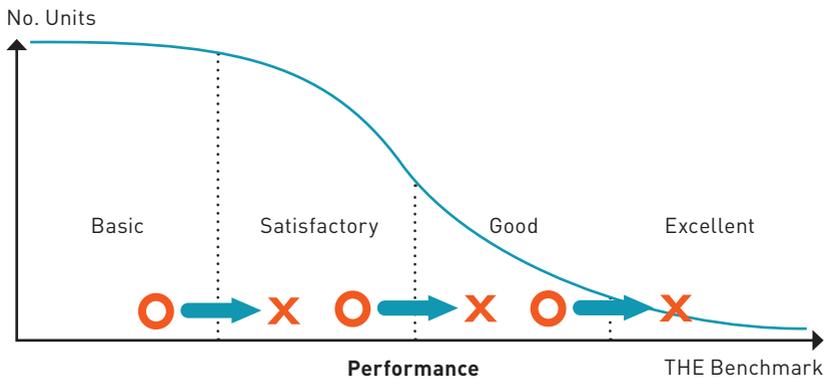


Figure 3 Benchmarking aims to improve and optimise performance

The benchmarking process is dependent on the availability of data against which an organisation can make a comparison of its own performance. There are in many fields with well-established benchmarking clubs which have gathered sufficient depth of data to allow a single organisation to come with appropriate data, and to be told where it lies in terms of the performance spectrum. IBM and the London Business School for example led the development of a consortium who created the 'PROBE for manufacturing' tool which assembled a database of practice and performance covering 4,000 companies internationally, allowing any organisation to quickly benchmark its performance against a set of suitable comparators. However, where there are not such databases, and indeed this was also true during the time that the PROBE tool was being constructed, a more usual approach is to bring together a club of companies which have similar interests and challenges and to benchmark within that group.

4.2 UNIVERSITY BENCHMARKING: A SUITE OF OPTIONS

Although benchmarking was developed as part of the development of quality improvement techniques in manufacturing, it has also been very successfully applied to service industries. Benchmarking can also be applied to the provision of public services, including higher education, but it is vital within that application process to ensure that the benchmarking remains consistent with the fundamental principles of the technique. Critically, benchmarking must not be allowed to develop into something which is not geared towards the improvement of processes and the better achievement of institutional goals and fulfilling commitments towards stakeholders (see [The dos and don'ts of benchmarking](#)).

There are various approaches to benchmarking universities, which we outlined in the *Practical Guide*.

- **Internal benchmarking:** comparing activities within units of the same institution e.g. between faculties or services
- **External benchmarking:** comparing activities across institutions
- **Functional benchmarking:** focusing on a specific process for detailed benchmarking work
- **Trans-institutional benchmarking:** a group come together around a common interest to build understanding of the process
- **Implicit benchmarking (ranking):** analysing performance or output data provided for other purposes to understanding comparative performance
- **Generic/process benchmarking:** focusing on best-practice in particular process areas to identify innovative approaches and solutions.

As we have previously noted, there are not currently readily available datasets of university benchmarking data which would allow a single university to decide to benchmark itself against the database. This means that in practice, university benchmarking is restricted to what can be achieved. Universities may choose to benchmark internally using their own data, and governments and other public bodies may benchmark universities implicitly on the basis of data provided for other purposes. Our concern in this report is with trans-institutional benchmarking, where a group of universities come together

around a common strategic interest, and firstly attempt to better understand the processes underlying that theme, and then to identify their relative good performance against the benchmark.

The second project phase, the pilot project, recruited universities to benchmarking groups covering four themes, lifelong learning, governance, curriculum and university-enterprise cooperation. These themes were the strategic interests of universities which participated in those exercises, but in practice, the themes had to be reduced to a set of 'aims'. The LLL-CPD group (lifelong learning with focus on continuous professional development) exemplified this by choosing to focus in on the issue of continuing professional development, and in particular access and transition to courses, institutional management of Continuing Professional Development (CPD), and cooperation with enterprises in the provision of CPD. This provided a shared basis for the benchmarking, which reflected both the generic theme but also the specific interests of the participating universities. A different selection of universities might have chosen an alternative set of focuses for the theme.

The next issue is what precisely it is to be benchmarked, what the origins of the uncertainty are that make benchmarking an applicable tool, how data is to be used to feed into strategic improvement. For universities, natural variation may be a problem – for example fluctuations in terms of student recruitments, research projects won, funding levels achieved and consultancy contracts acquired. But other uncertainty also arises from the fact that university strategic change is taking place against a wider upheaval in the environment for universities. This can make it extremely difficult to disentangle whether fluctuations are structural or cyclical. More generally, the difficulties of applying quality measures to universities are well-known, are documented at length in the *Practical Guide*, and can be broken down into four main areas.

- Universities are very complex as institutions, with a huge degree of variety between institutions, in terms of size, mission, profile, markets and focus, but also even within institutions where different faculties (notably medical faculties) may have entirely different structures and organisations that make comparison difficult and contentious.

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- Universities operate in a quasi-market environment where there is some competition between institutions alongside collaboration and strong regulation at the national level, giving rise to qualitative different kinds of institution that are not necessarily comparable.
- Universities traditionally do not think in process terms, but rather in terms of the task they deliver such as teaching, research and the 'third mission' which covers just a small element of the overall process which they contribute to their stakeholders, such as the development of higher level skills or the stimulation of innovation.
- Universities have differing strategic orientations and similar organisations may have a predetermined interest in particular areas of process improvement dependent on demands of external stakeholders which direct their interest in performance improvement towards particular thematic areas.

These characteristics create a set of boundary conditions for university benchmarking which determine what can be achieved with a benchmarking process. The first is the importance of understanding the underlying process with which benchmarking is concerned. This mission elements relate to the particular processes by which the universities produce outcomes that satisfy their stakeholders, such as teaching, research, third mission, estates management, governance and administration. Figure 4 below provides schematics for how process thinking could be applied to particular university processes, in particular to provide a full-cycle understanding of how what the university is doing relates to its wider context and the desired outcomes of stakeholders/ customers. A process typically has four stages which relate to different parts of the university, and what Figure 5 below makes clear is that these elements all are specific to the university, and in particular reflect what is the ultimate desired outcome for the particular process.

Outcomes: these are the high-level objectives that the university wishes to satisfy in order to fulfil its organisational mandate, and are typically expressed in things like vision statements and missions. Different kinds of universities might have very different desired outcomes for their teaching activities, producing global citizens, potential superstar researchers, high quality employees for local businesses, or effective democratic citizens.

Outputs: these are the immediate 'products' universities produce which come out of the particular task undertaken by the university. In teaching, this will typically be graduates, and then their conversion into outcomes proceeds as the graduates find employment, continue into research degrees, or contribute to society, depending on the university's desired outcome for its students.

Processes: these are the processes by which universities organise and arrange their key tasks, such as teaching, research and the third mission, which take the inputs and transform them into the outputs. A university interested in producing high quality employees for local businesses might want to provide a curriculum which met national quality standards, included local business input to the course, maximised student work placement opportunities, and which included employability skills as integral within the curriculum.

Inputs: these are the resources which have to be acquired and brought together through the particular processes to create the outputs. A university training future research leaders might believe that the quality of its physical infrastructure is a vital precondition for its success in recruiting the most talented students, and therefore an ongoing infrastructure development programme might be a critical input to its teaching activities in the context of its wider institutional ambitions.

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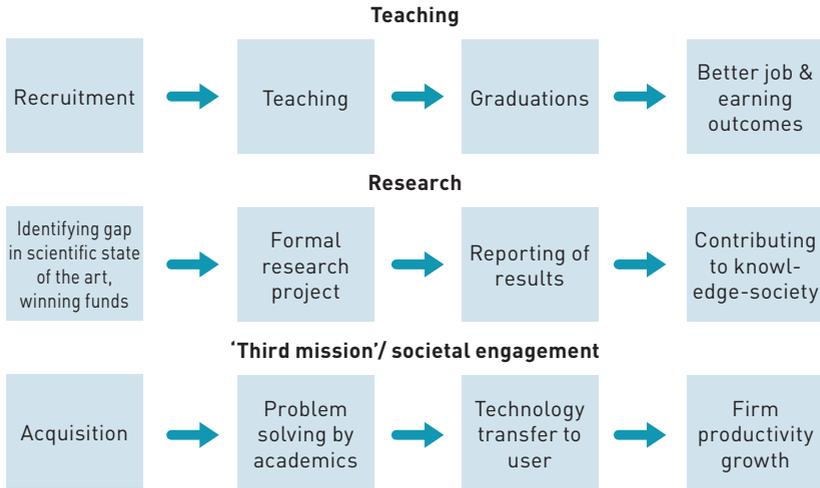


Figure 4 A schematic overview of potential university processes

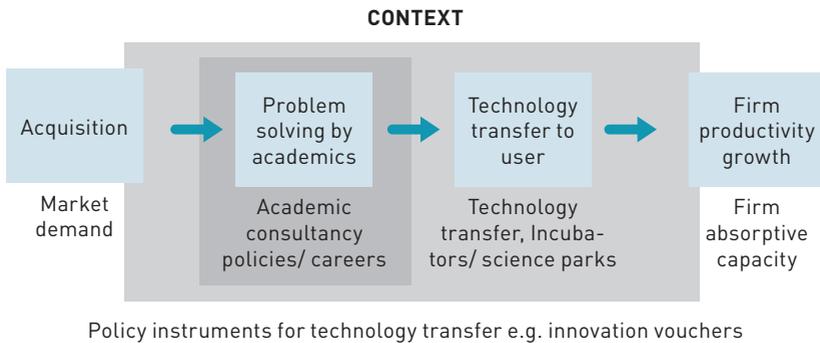


Figure 5 The relationship between process and indicators, consultancy activity.

Secondly, benchmarking is a learning process whereby organisations – in this case universities – learn about themselves in order to improve their own performance and better satisfy their key stakeholders. That learning process requires a degree of commitment by the institution to the benchmarking

process before the process begins. But to maximise the chance of a successful improvement, the institution needs to be interested in the findings from the benchmarking, and it needs to fit with the strategic needs of the university as perceived by its senior managers. The Bologna process has for example been an important element of higher education reform in recent years and has formed a good hook for universities to be interested in benchmarking their accreditation, internationalisation, student transfer and mobility performance. Those institutions have done it because the topic fits with their strategic agenda, therefore universities applying benchmarking need to be clear what their strategic agenda is and how the chosen benchmarking topic fits.

The third influence on university benchmarking is the absence, at the moment, of a large database of benchmarking information corresponding to all the processes and tasks with which the diversity and plurality of universities may be concerned. This means that any university benchmarking exercise at this stage is likely to be a negotiated process within a group of universities that come together. This means that there needs to be a common strategic interest and sufficient similarity between the participating institutions for common lessons to be learned and best practice established and exchanged. This is not a task to be underestimated because the key determinant of the value of a benchmarking exercise is the number of participants who make it through to the data gathering stage. This requires substantive commitment from participants and therefore there needs to be a good alignment of interests within the group towards a potential common theme to ensure the momentum is sustained.

In this *Handbook*, we are specifically concerned with trans-institutional benchmarking as the area where the benchmarking methodologies are least developed. In this case, a group of universities come together and must define and delineate a shared interest that is close enough to their particular strategic emphasis at that moment, but is sufficiently broad to allow a range of universities to participate. This group must come together and agree a common topic, then develop shared understandings of the underlying processes, gather and exchange data, and ultimately each individually learn more about their performance and areas for improvement.

4.3 THE SIX STAGES OF UNIVERSITY COLLABORATIVE BENCHMARKING

University benchmarking is not a mechanistic process which can be routinely undertaken. Benchmarking is a process which has several values, through the comparative learning, through the way in which a benchmarking process engages with external experts to help define issues and processes, and through the way participants are able to agree what counts as good or bad performance. However, benchmarking processes typically follow a common format, which proceeds through a set of stages to deliver a set of common outputs. The number of stages varies according to the type of benchmarking exercise underway. In the PASCAL Observatory benchmarking of university regional engagement (the 'PURE' project), where there are pre-defined benchmarks and performance targets, and which is primarily an internal benchmarking exercise, the authors distinguish five stages in the benchmarking process.

- 1. Initiation.** A team is established to implement the benchmarking approach, briefed on the objectives, provided with copies of the [PASCAL benchmarking tool], and informed on how to complete it.
- 2. Preparation.** Each team member examines a copy of the benchmarking tool, and makes an initial assessment.
- 3. Workshop.** An event is held in which all the questions are discussed, and a single common set of answers agreed.
- 4. Report.** The responses are analysed and results are returned to the participating team members other regional partners, and the PURE project.
- 5. Dissemination.** The results of the report are discussed by the team and perhaps with other regional partners to decide how the findings will be used and disseminated within the region.

Source: Charles et al., 2009.

For the purposes of collaborative, trans-institutional university benchmarking, what is critically important is to turn a generic theme into a set of priorities, identify the processes underlying the priorities, decide decision-rules

that allow performance to be classified for each of the processes, gather the data, analyse institutional performance and produce a plan for change. Therefore, as identified in the Practical Guide, and reiterated here, a collaborative benchmarking exercise will typically involve six main steps to ensure that it contributes most effectively to institutional performance improvement.

1. Strategic decision-taking
2. Choosing partners
3. Defining priorities, targets, criteria, indicators and benchmarks
4. Data gathering and reporting
5. Developing an Action Plan (including a Business Plan) to introduce change
6. Monitoring and follow-up

In this *Handbook*, we report findings from a pilot benchmarking process which brought together around forty universities covering four thematic areas which all completed these six steps and benchmarked performance to allow senior managers to develop an action plan for change. What emerged within the pilot process was that it was quickly made clear that benchmarking is not a routine process. Benchmarking involves making difficult choices within an institution, and dealing with a set of other institutions in a comparator group effectively to maximise the benefits that the individual institution gets out of the process.

In each of these six steps there are a number of pinch points and critical moments that have to be addressed in order to ensure forward momentum in the benchmarking process. What is less appreciated are the softer skills and techniques required to keep the 'benchmarking community' together throughout an exercise. The focus for this *Handbook* is therefore to emphasise what can be done in the course of a process to ensure that the benchmarking group deals with these critical moments and emerges from them well-positioned to use the experience to better understand their performance relative to the 'benchmark'.

The six stages give an idealised process overview of what a benchmarking exercise is attempting to achieve, to hold together a group of institutions together to complete successfully a shared learning process that translates

into individual performance improvement. But the six stages are substantial activities in their own right, and represent periods where institutions will be learning, negotiating with the comparator, collecting data and information, and consulting internally. Each of the stages can be subdivided into a set of steps that each have to be completed to ensure that individual institutions remain interested in the process and can see the clear benefits they derive from this participation. Each of these steps corresponds to one of the six stages of the university collaborative benchmarking process set out above and which we explain below.

4.3.1 STRATEGIC DECISION-TAKING

The first stage is the decision by the institution that it wants to undertake a benchmarking exercise and the field within which it wishes to benchmark. The institution needs to have a commitment from its senior managers to support the completion of a benchmarking project, to appoint a project team with sufficient gravitas to sustain project momentum and draw selectively on senior management support, and able to fir the benchmarking exercise and its results into the developing institutional strategic agenda.

4.3.2 CHOOSING PARTNERS

The second stage is the identification of potential partners with whom to form a benchmarking group. There is a need for these partners to also have a strategic interest sufficiently close to your own for the exercise to be interesting for them, and also for them to be of a similar degree of development for there to be opportunities for exchange of best practice between the partners. There is also the need for the identification of external experts who are able to provide feedback on the subsequent stages.

4.3.3 DEFINING PRIORITIES, TARGETS, CRITERIA, INDICATORS AND BENCHMARKS

The third stage is the elaboration of the field within which the benchmarking will take place, in terms of the priorities which the institutions wish to achieve and the processes which are being improved. This stage also involves the technical construction of the benchmarking exercise in terms of defining performance indicators and evaluation criteria, and the criteria for what would represent best practice in that particular field.

4.3.4 DATA GATHERING AND REPORTING

The fourth stage involves gathering data amongst the partners, identifying relative performance levels between the partners, and for all partners identifying areas of strength and weakness. From this stage individual institutions have an awareness of where there is scope for greatest improvement, as well as an understanding of the practices and processes of comparable institutions which nevertheless perform better than themselves, and which can help shape their action plan.

4.3.5 DEVELOPING AN ACTION PLAN (INCLUDING A BUSINESS PLAN) TO INTRODUCE CHANGE

The fifth stage is the development of an action plan to address the weak points identified through the benchmarking, informed by the best practice observed in the benchmarking exercise as well as the theoretical understanding of the process and the benchmark from stage 3. These action plans must be implementable and drawn up in parallel with business plans which allocate the necessary resources and impetus to ensure the strategic changes are implemented.

4.3.6 MONITORING AND FOLLOW-UP

The final stage of the performance improvement process involving benchmarking comes once the improvement plan has been implemented, and evolves evaluating the success of the changes made and then whether the overall performance has been improved. This can be delivered on the one hand by setting targets for success within the action plan, or potentially by comparing past against current performance, or conceivably by the benchmarking group coming back together after an appropriate time interval to benchmark themselves and evaluate who has improved their overall performance.

The *Practical Guide* placed approximately equal emphasis on all of these six processes, whilst it is clear that there is a different level of understanding of each of these stage processes. There is nothing that we would choose to add to the *Practical Guide* either in terms of what universities should consider before starting out on a benchmarking exercise, or things that universities should bear in mind in seeing to assemble a set of comparators. Where the second phase has refined the understanding that was set out in the *Practical*

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Guide is in the latter four stages; implicit within the *Practical Guide* was the idea that it was sufficient to have a clear vision for benchmarking and assemble the right group.

Our experience in the second phase was that this was not the case: clearly, a stage that involves “Defining priorities, targets, criteria, indicators and benchmarks” is a lengthy process, with each element dependent on effectively completing the previous step. From a theme, priorities must be defined and agreed before targets can be set, and criteria are necessary before there can be indicators; a solid understanding of the processes underpinning the priority are vital to identifying the benchmark.

In this *Handbook*, we resolve this difficulty and complexity by breaking down the latter four stages into a series of steps. The final chapter of the report provides a step-by-step guide for university benchmarking groups with an agreed high level agenda to come together and initiate and complete a collaborative benchmarking exercise.



BENCHMARKING AS A LEARNING PROCESS FOR UNIVERSITIES

The background is a gradient of light blue to dark blue. It features several white circles of varying sizes scattered across the left side. On the right side, there are multiple thin, light blue lines that curve and swirl together, creating a sense of motion and depth.

5. BENCHMARKING AS A LEARNING PROCESS FOR UNIVERSITIES

Before universities begin a benchmarking process, they should understand the use of data. This *Handbook* provides an annex which provides a general introduction to the topic which can be read in association with this chapter” Data, indicators and performance indicators: an overview”.

5.1 THE IMPORTANCE OF LEARNING TO EFFECTIVE BENCHMARKING

One of the most important messages of this *Handbook* is the fact that university benchmarking is not a mechanical or mechanistic process. Benchmarking is a valuable technique which can be used as part of a strategic improvement process. The key determinant of the success of a benchmarking process is therefore not the quality of the benchmarking activity. Rather, it is the commitment of the institution to strategic improvement, and in particular, to using the benchmarking to identify areas for strategic improvement.

Benchmarking contributes to a learning process which helps to give confidence to university managers that they have correctly identified their strengths and weaknesses, to help them understand potential improvements, and to understand whether those improvements have effectively been delivered. Good benchmarking needs to be premised on **strong learning environments**, at three levels, within the individual institutions, within the benchmarking groups, and by involving experts in the development of the group.

At the level of the institution, there are a number of features which strengthen the learning environment and the capacity of the institution to benefit from benchmarking. Higher education globally is going through a process of reform, which creates a set of strategic challenges for institutions: the themes and topics addressed by the benchmarking must therefore fit with the most imminent strategic challenges facing the institutions. There needs also to be a rational decision to benchmark, tied to understanding and improving the position of the institution in a particular thematic area. There must be managerial commitment to the learning and improvement processes, and in particular, a willingness to be challenged by comparing one's

own institution against the best. Finally, there needs to be patience, because the learning process as a whole takes time to successfully achieve and embed within a complex institutional environment.

At the level of a benchmarking group, the issue is that participation is likely to be defined by interest in a topic rather than by expertise in that topic area. As a consequence of this, in any benchmarking group, there is likely to be a mix of institutions who are leading in terms of their practice and performance, and those institutions who are more akin to learners. Creating an effective learning environment involves ensuring that all group members are able to contribute effectively, and that the difference in experience level does not derail progress through the benchmarking process. Using the leaders – universities in a group who have good practices and understanding can be useful to give concrete examples to the group of the key challenges involved in particular topic reforms. This can help to avoid a situation where a group with a wide range of expertises is unable to progress in terms of identifying benchmarks because they are unable to come to a consensus regarding basic issues such as definitions and priorities.

The final level of learning is to ensure that a benchmarking group is well-linked to external knowledge sources. Higher education management research offers valuable insights into understanding in a more abstract way the challenges faced by particular groups. Likewise, there are good practice examples ‘out there’ in the literature which can be used in helping to establish ‘the benchmark’, the best performance that can be achieved in some particular problem area. In the context of a collaborative benchmarking exercise operating through a group, it may be useful to involve external experts with specific knowledge of that challenge or domain area, who can provide a structure to discussions and help to specify more clearly the interests and priorities of the group.

The dynamic of the group, including differentiated roles, a willingness to learn and the involvement of outside experts, help to drive the continuous learning process through which a benchmarking process is able to add value to institutional improvement. This is represented in figure 6 on next page.

BENCHMARKING AS A LEARNING PROCESS FOR UNIVERSITIES

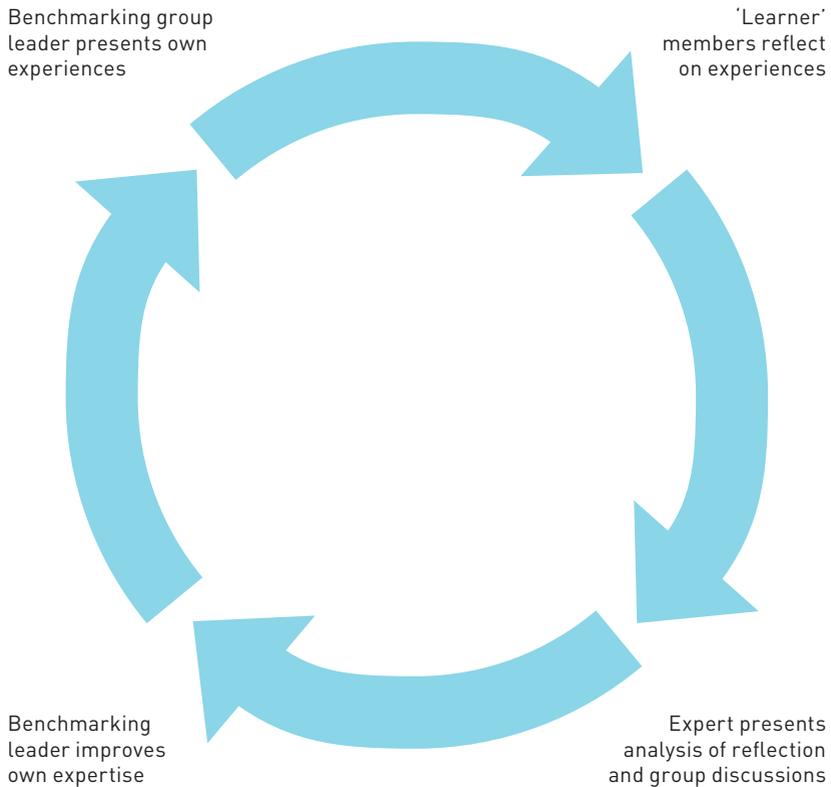


Figure 6 The continuous learning process in benchmarking: leaders and followers

5.2 BENCHMARKING AS A PRACTICAL AND A STRATEGIC ACTIVITY

Viewed from the perspective of an institution, a benchmarking process is a curious hybrid. On the one hand, it represents an institutional commitment by senior managers to high-level strategic thinking and performance improvement. On the other hand, in practical terms, university benchmarking in an institution is likely to take the form of a small team, office or individual running a project gathering and interpreting data and periodically reporting back to the senior managers notionally in charge of the process.

A successful benchmarking exercise is able to hold these two elements together seamlessly, with a benchmarking project team progressing the exercise forward seamlessly and working at the appropriate moments intensively with institutional managers to secure their involvement in the project and to garner the benefits for the participating institution.

Given the complexity of universities, their external environments, the strategic challenges they face and their own profiles and orientations, making inter-institutional comparisons can be a fraught process. From the basis of the second phase we noted a tendency within university benchmarking to focus on the high-level strategic dimensions of this process, and to downplay the importance of an ongoing dialogue between managers and the benchmarking team about how to translate the principles of benchmarking into the messy practical context of the particular HEI.

However, effective university benchmarking needs to involve senior managers in the translation of high-level principals into interpretations of the particular university or college.

Benchmarking throws up ambiguities and tensions for universities as they try to work out what matters. Universities may worry that defining desired outcomes and goals may generate negative publicity or profile for themselves, and so universities may use mealy-mouthed formulations which hide their real intent. This can undermine universities learning

about what they are really doing, and how effectively their internal task performances are contributing to hitting their overall institutional mission. Benchmarking can only succeed where senior managers are prepared to think honestly about these ambiguities and tensions and benchmark the real institution rather than the institution they would like to be able to portray in the media.

5.3 LEARNING ABOUT BENCHMARKING: BEYOND STRATEGY AND VISION

There has been a tendency in university benchmarking research to downplay the effort required to ensure that effective benchmarking contributes to effective institutional learning processes and thereby to strategic improvement. It is often assumed that once a benchmarking process is initiated, as long as the steps are completed, then the exercise will be effective. In the pilot project (the second phase), we tested this hypothesis by setting up four groups to focus on benchmarking universities in four different domain areas. More information about the second phase is available in the following chapter.

The main finding of second phase was that effective benchmarking depended on ensuring continuing forward progress, and that ensuring forward progress was not trivial. The reality is that effective completion of a benchmarking exercise means negotiating a series of intensely practical hurdles. Barriers to effective progress arise from various different directions in the course of the benchmarking process:

- It can be difficult to agree consensus on priorities because of differences in strategic priorities across different national higher education systems.
- Less experienced benchmarkers may rush into gathering data without really understanding what they need to know.
- Members of a benchmarking group may drop out of a process if the strategic interest of their university changes away from the topic covered by that group.

These practical hurdles have not been well-treated in the literature, and the focus of this *Handbook* is on how a collaborative benchmarking group can ensure that from the point the group is constituted, there is effective forward

progress that produces strong lessons which interested universities can apply in strategic improvement. We therefore break the latter four stages of the benchmarking model from the *Practical Guide* into thirteen steps which need to be effectively completed in order to deliver a useful benchmarking exercise. At each stage, partners need to ask themselves whether the criteria for taking that step have been completed, and only if they can be reasonably confident that they have completed the step, and have the prerequisites for the next step, that they attempt to move forward in the process.

The final section of this report takes these thirteen steps, and for each of those steps, provides practical insights into how to ensure that the step is successfully begun, incidental and emerging problems addressed, and that participants can be clear that they have completed the task. Each step is presented in a common format which is designed to provide six pieces of information applicable at that stage of the benchmarking process.

- **Outline of task:** the essence of this step in the benchmarking process
- **Key issues arising:** main problems which may arise in seeking to take this step.
- **Critical Success factors:** outline of effective practices in taking the step
- **Addressing the task in practice:** a worked example of an second phase group addressing these issues and identifying critical success factors
- **Learning outcomes for participants:** checkpoints which indicate successful completion
- **Linking to the next step:** information participants take forward into the next step.

As already noted, the thirteen steps only relate to the latter four stages of the benchmarking process, both as the *Practical Guide* provides sufficient information for those wishing to undertake them, but also because the second phase worked with institutions that had decided to benchmark and which organised themselves into four thematic groups, making it difficult to have anything significant to say about these activities. Therefore, in the *Handbook* we do not add anything to the first two stages of the benchmarking process:

- **A. Strategic decision-taking:** this is the internal decision by the university to use a benchmarking approach to improve some area of institutional performance through a comparison with a group of like institutions.

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- **B. Choosing partners:** identifying a group of HEIs interested in improving their institutional performance in the selected area, a willingness to participate in a benchmarking process, and sufficient mutual similarities for sensible comparison.

This leaves our focus on the last four stages, which for the sake of completeness are outlined below.

Nomenclature note:

In the step-by-step guide, we adopt the convention of referring to the stages according to their stage and step in the process as set out below, so the thirteen steps are referred to as 1(a), 1(b), 1(c), 1(d), 1(e), 1(f), 1(g), 2(a), 2(b), 3(a), 3(b), 4(a), 4(b). 1(e) refers to the fifth step in the first stage, namely developing expertise lessons and scoring.

5.3.1 DEFINING PRIORITIES, TARGETS, CRITERIA, INDICATORS AND BENCHMARKS

The first stage of a benchmarking exercise that we focus on here involves the elaboration of the thematic area within which the benchmarking will take place, in terms of the priorities which the institutions wish to achieve and the processes which are being improved. This stage also involves the technical construction of the benchmarking exercise in terms of defining performance indicators and evaluation criteria, and the criteria for what would represent best practice in that particular field.

a. Deciding priority areas

This step involves agreeing the priority areas which the group will address, breaking down a broad area of interest into a limited number of detailed thematic areas which are satisfactory for all participants.

b. Brainstorming the priority area processes

This stage involves taking the priority areas and identifying what the underlying university processes in these areas are, highlighting how these processes are tied to wider environmental and strategic changes, and to the main activities of universities.

c. Developing the list of potential indicators

This step involves developing a set of indicators which can be used to identify relative performance levels, and considering which kinds of data is available to at the participating institutions to measure the relative performance.

d. Agreeing the 'long list' of potential indicators

This step involves agreeing a set of indicators which will be used to highlight relative performance levels, on which all the institutions see at least some relevance, and for which sufficient data is available to allow a degree of comparison.

e. Developing expertise levels and scoring

In this phase of benchmarking, in a collaborative benchmarking methodology seeking to compare sometimes quite different institutions, the task is to take the agreed long list of indicators, and for each of those indicators, agree what represents performance at each of the four possible expertise levels (basic, standard, good and excellent).

f. Creating the 'balanced scorecard'

This step involves taking the list of indicators agreed with the institutions, and ensuring that they cover the whole process cycle, from inputs to outcomes, and therefore provide the broadest perspective on understanding performance.

g. Finalising the indicator set with senior managers

Once the balanced scorecard has been developed in a practical sense, it is necessary to ensure that the participating institutions all agree at the managerial level commissioning the benchmarking, that the indicator set and the scorecard make sense and are applicable from their specific institutional perspective.

BENCHMARKING AS A LEARNING PROCESS FOR UNIVERSITIES

5.3.2 DATA GATHERING AND REPORTING

The second stage involves gathering data amongst the partners, identifying relative performance levels between the partners, and for all partners identifying areas of strength and weakness. From this stage individual institutions have an awareness of where there is scope for greatest improvement, as well as an understanding of the practices and processes of comparable institutions which nevertheless perform better than themselves, and which can help shape their action plan.

a. Gathering and validating the data

The first step in the data gathering and reporting process is each institution gathering the data against the agreed indicator set, identifying where data is not available and validating the provided data.

b. Scoring the institution against the benchmark

The next step is to formally score the institution against the benchmark, in this case to place the institution against a sophistication level for each of the priority areas for each of the process phases.

5.3.3 DEVELOPING AN ACTION PLAN TO INTRODUCE CHANGE

The third stage is the development of an action plan to address the weak points identified through the benchmarking, informed by the best practice observed in the benchmarking exercise as well as the theoretical understanding of the process and the benchmark from stage 1. These action plans must be implementable and drawn up in parallel with business plans which allocate the necessary resources and impetus to ensure the strategic changes are implemented.

a. Diagnosis of institutional strengths and weaknesses

This step involves taking the institutional scorecard and identifying both the areas where improvements can be made as well as institutional strengths which can provide a basis for improved performance.

b. Developing an action plan around pilot project

This step involves creating a pilot project which can help to address the problems and consolidate the strengths identified through the benchmarking process, and contributing to the strategic development of the university.

5.3.4 MONITORING AND FOLLOW-UP

The final stage of the performance improvement process involving benchmarking comes once the improvement plan has been implemented, and evolves evaluating the success of the changes made and then whether the overall performance has been improved. This can be delivered on the one hand by setting targets for success within the action plan, or potentially by comparing past against current performance, or conceivably by the benchmarking group coming back together after an appropriate time interval to benchmark themselves and evaluate who has improved their overall performance.

a. Implementing the action plan

The final stage involves implementing the action plan to produce the desired improvement; the first step in this stage involves ensuring there is sufficient resources and effort placed into delivering and completing the strategic change.

b. Reporting back

The final step of an effective benchmarking process is to review progress to evaluate whether the action plan has succeeded, and improved the relative performance and process organisation of the activity within the university, both with reference to the original project group and benchmarks.



The background is a gradient of light blue to dark blue. It features several white circles of varying sizes scattered across the left side. On the right side, there are multiple thin, light blue lines that curve and swirl together, creating a sense of motion and depth.

GOOD PRACTICE IN
BENCHMARKING:
FOUR STAGES,
THIRTEEN STEPS

6. GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

The Benchmarking in European Higher Education process was a pilot project in which much learning has taken place. The opportunity has been taken to produce a synthetic model of how benchmarking should have been done, learning from the efforts made to expedite the benchmarking process. In practice, the groups encountered difficulties which meant that in some cases they had to return to a previous stage and attempt an alternative approach to the benchmarking. On the basis of that experience, and the lessons learned from the benchmarking process, we have refined the benchmarking model on the basis of how we would approach were we to do it again, rather than claiming that what we present here is a model of how the benchmarking process in the second phase actually proceeded. This is set out in table 1 below.

Table 1 An overview of the stages and steps of a typical university benchmarking process

1. Defining priorities, targets, criteria, indicators and benchmarks	2. Data gathering and reporting	3. Developing an Action Plan to introduce change	4. Monitoring & follow-up
<ul style="list-style-type: none"> a. Deciding priority areas b. Brainstorming the priority area processes c. Developing the list of potential indicators d. Agreeing the 'long list' of potential indicators e. Developing expertise levels & scoring f. Creating the 'balanced scorecard' g. Finalising the indicator set with senior managers 	<ul style="list-style-type: none"> a. Gathering & validating the data b. Scoring the institution against the benchmark 	<ul style="list-style-type: none"> a. Diagnosis of institutional strengths and weaknesses b. Developing an action plan around pilot project 	<ul style="list-style-type: none"> a. Implement the action plan b. Reporting back

In the following section, the lessons learned have been applied at the step to which they are most applicable, rather than to the step or stage of the process at which they were done in practice.

Nomenclature note:

In the step-by-step guide, we adopt the convention of referring to the stages according to their stage and step in the process as set out below, so the thirteen steps are referred to as 1(a), 1(b), 1(c), 1(d), 1(e), 1(f), 1(g), 2(a), 2(b), 3(a), 3(b), 4(a), 4(b). 1(e) refers to the fifth step in the first stage, namely developing expertise lessons and scoring.

6.1 DEFINING PRIORITIES, TARGETS, CRITERIA, INDICATORS AND BENCHMARKS

The starting point for the benchmarking exercise was defining priorities, targets, criteria, indicators and benchmarks. Universities chose one/two thematic area and were allocated to the benchmarking groups accordingly. Guidance on the how institutions should manage that topic for themselves are provided in the *Practical Guide* and for the sake of space are not repeated here.

This involves the elaboration of the field within which the benchmarking will take place, in terms of the priorities which the institutions wish to achieve and the processes which are being improved. This stage also involves the technical construction of the benchmarking exercise in terms of defining performance indicators and evaluation criteria, and the criteria for what would represent best practice in that particular field.

By the end of this stage, each participating group will understand what the priority for the thematic area is, how the process operates in terms of contributing to overall aims and goals of the institution, what constitutes good practice in these processes and what kinds of evidence can indicate how each participating institution is performing in terms of these priority processes.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

6.1.1 DECIDING PRIORITY AREAS

Outline of task

This step involves agreeing the priority areas which the group will address, breaking down a broad area of interest into a limited number of detailed thematic areas which are satisfactory for all participants.

Key issues arising

- There will be a mix of experience levels within the group, and the most enthusiastic might not necessarily be those that have the most experience and understanding.
- There may be a tendency to spend a huge amount of time discussing the topic rather than trying to identify shared interests, which then exhausts enthusiasm for the later stages.
- There will inevitably be important national contextual differences that can obscure the similarities between context and hinder the agreement on a consensus for the priority areas for the group.

Critical success factors

- Identifying the strategic fit of the outline topic to the particular strategic interests of the universities and the pressures to which they are sensitised.
- Quickly identifying the practical areas of interest to the universities, and turning a high-level interest (e.g. lifelong learning) into a set of practical concerns of strategic interest to the universities.
- Identifying an experienced university within the group to lead the discussions and present examples which help to structure the overall discussion
- The involvement of experts with a good understanding of the general challenges and issues in the domain area.

Addressing the task in practice

The issue of defining priority areas was of critical interest to the governance group, because of the overall breadth of the topic. It was very difficult for the universities to agree on what the common interest was, because although governance learning is something that is of strategic interest to almost all universities, the particular challenge facing institutions depends to a strong degree on the current state of the university, as well as the broader national context and legal framework for university decision-making. It is rarely a topic of strategic interest to the university.

This issue of generality was addressed by taking a practical example from one of the participant groups in which they had already been trying to improve the quality of their governance, namely in risk management.

This was then treated as a 'worked example' for the group: this gave all the participants something tangible to discuss around decision-making, and in particular, what constituted good performance in decision-making behaviour.

For the less experienced group members, this gave them the confidence to try to articulate what their governance challenges were in terms of the particular strategic challenges facing the university. One of the universities faced the challenge of appointing significant numbers of new staff to fill the posts left by retiree. The challenge was ensuring that the university upheld the rigour and independence of the appointments process at a time when the appointments infrastructure was anticipated to come under increasing stress.

Once the various group members had all learned about governance through its applicability to their own institutions, it then became possible to have input from the benchmarking group leader, who was able to identify four key themes within the literature as indicative of 'good governance, namely stakeholder involvement, decision-making, information and communications, and clear tasks and responsibility.

Together, this gave the group the basis to agree that their interest in the benchmarking case was in developing decision-making processes within the university embodying these principles. The priority for the group was therefore on benchmarking their decision-making processes (and improving them) against four areas, transparency, decisiveness, legitimacy and ownership/accountability. This is illustrated in figure 7 below.

The target for the group agreed was introducing and/or improving risk management, with a focus on strategy and core processes or developing clear principles and/or methods to assess risks and how to deal with this. This helped to create a balance between those participants with a clear preference for the former and those whose preference was for the latter. The benchmarking experts here played the role of bringing those two targets together. What was agreed was that the focus for the group would move in on

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improving aspects of risk management in higher education strategy, finance, human resources or teaching and learning or research. The rationale behind this choice was an attempt to find something that covers the interests of all participants, extending from dealing with financial uncertainty on the one hand, through challenges in the area of attracting and/or appointing new staff, as well as the more strategic issues around developing new institutional strategies. This meant that the approach offered something for those more experienced institutions as well as for those whose knowledge of governance was more restricted.

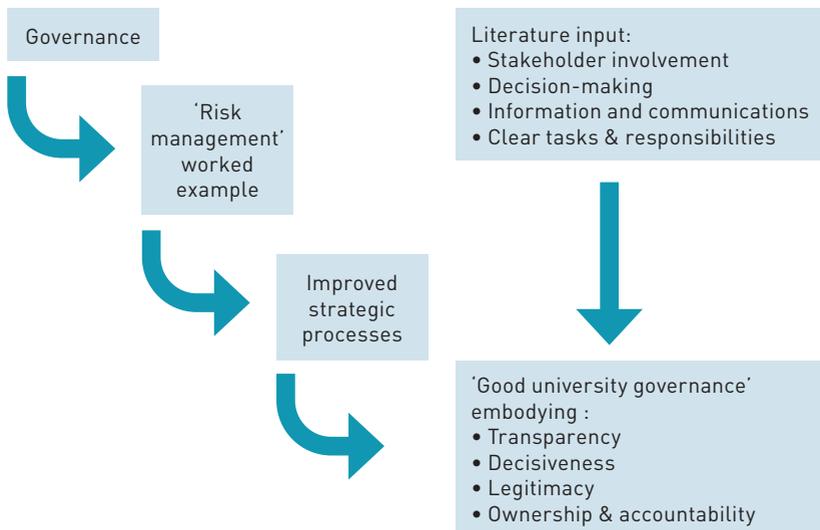


Figure 7 Transforming a high-level interest into an operational priority set: the case of governance.

Learning outcomes for participants

By the end of this task:

- There is a shared definition of which element(-s) of the overall domain the benchmarking will focus on, and why it is of strategic interest to all the partners,
- There are a set of criteria developed for kinds of things are valued as 'good' in terms of the overall domain area

- There is a consensus that this definition is a solid basis for the further progress of the benchmarking process.
- There is some identification of who are the more experienced group members who can help to inform the next stage in the process, mapping the processes underlying the domain area.

Linking to the next step

The next step in the benchmarking process is taking the agreed focus for the benchmarking group, and identifying the processes within which universities are involved which influence their performance of that task.

6.1.2 BRAINSTORMING AND DEFINING PRIORITY AREAS

Outline of task

This stage involves taking the priority areas and identifying what the underlying university processes in these areas are, highlighting how these processes are tied to wider environmental and strategic changes, and to the main activities of universities.

Key issues arising

- A divergence of the experience levels between members of the benchmarking group, with less experienced members wanting to move immediately to data gathering and comparison before the priority areas are clear.
- Returning to discussions over the definition of the topics to be considered rather than progressing towards selection of strategic priorities and improvement areas.
- A narrow focus on institutional interest rather than attempting to define improvement of an topic area adopted by other interests.
- Participants passing judgement on one another rather than defining better the priority areas.

Critical success factors

- Taking the time to discuss and debate areas of disagreement or divergence, in order to ensure that the identified priority areas meet with the real rather than expressed needs of the target groups.
- Identifying targets which are phrased in ways that are unambiguously 'good': increasing these things definitely improves the strategic goal.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

- Avoiding a discussion of potential indicators and the feasibility of data gathering until it has been possible to agree on a set of principles and targets for what constitutes good practice in this area.

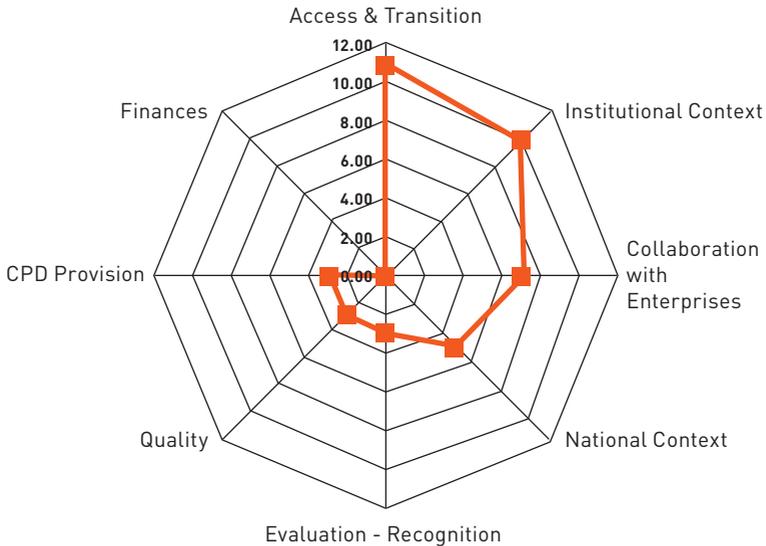


Figure 8 Ranking the potential priorities to decide three benchmarking priorities (LL-CPD , second phase).

Source: Brandenburg (2010)

Addressing the task in practice

The example of lifelong learning is instructive, because having agreed that what was important was strategy for the delivery of CPD, in a transparent, decisive, legitimate and accountable way, the next stage in the process was defining priority areas for the focus for the benchmarking.

The first stage in this process was to define three priorities for the benchmarking. The first was to look at issues of access and transition, and in particular, the extent to which units across the university were opening themselves up to outside influences. The second was to look at the strategic context for CPD, and in particular the sense to which CPD was taken seri-

ously as a mission by the institution. The third was the degree to which the university had built good links with enterprises and organisations.

The case illustrates the issue around ensuring that definitions are not overly restrictive: the third priority, building links with enterprises and organisations, was initially focused on firms. This sparked a discussion over whether hospitals and the medical sector – an important client for some universities in terms of their CPD should be included. This was resolved by amending the priority so that it was clear that this included both enterprises as well as other organisations external to the university who had a CPD need. The brainstorm produced a set of potential priorities, and then the participants scored and ranked those priorities to come up with the three most important of those variables which then formed the benchmarking priorities. This is shown in figure 8 on previous page.

The second stage of this process was then in defining a set of targets underneath the priorities. These targets are the targets for what is to be improved – so, for example, in terms of collaboration with enterprises and organisations, the two focal points for improvement were agreed upon as being improving stakeholder involvement and fostering education-driven education. This is shown in figure 9 below.

Figure 9 The priorities and improvement targets for the lifelong learning programme, operationalising CPD and the mission-driven curriculum.

Access and Transition	
Target 1	Definition of CPD target groups per programme type
Target 2	Implementation /review of functioning recruitment strategy
Institutional Context	
Target 1	Identify the approach to CPD in the HEI (strategic, operative or tactical)
Target 2	Assessment of importance of CPD within HEI
Collaboration with Enterprises/Organisations	
Target 1	Improvement of stakeholder involvement
Target 2	Fostering education-driven innovation

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Learning outcomes for participants

By the end of this task:

- There are a clear set of priorities and operational improvement targets agreed between the group members which form the basis for the future activity.
- There is a clear understanding amongst participants of how the priorities link to the principles for good practice, and how performance improvement of these priority areas is linked to the strategic improvement of the HEI.

Linking to the next step

The next step is in identifying the kinds of indicators which would be desirable to measure progress towards these targets, mapping the underlying process and coming up with an ideal type set of indicators.

6.1.3 DEVELOPING THE LIST OF POTENTIAL INDICATORS

Outline of task

This step involves developing a set of indicators which can be used to identify relative performance levels, and considering which kinds of data is available to at the participating institutions to measure the relative performance. Further detailed information on this area is available in the Annex “Data, indicators and performance indicators: an overview”.

Key issues arising

- A desire to begin from readily available data and to identify complementary indicators rather than to identify what indicators would have to be able to tell in order for them to count as successful indicators.
- A rejection of particular indicators for practical reasons such as availability, cost or political implications rather than identifying what are the ideal type indicators.
- Tunnel vision by participants in rejecting indicators that are seen as being irrelevant to their own situation, rather than identifying all the kinds of indicators that might be applicable to a particular situation.

Critical success factors

- Being exhaustive: identifying all the potential kinds of indicators that could give information about the desired priority areas without regard to their plausibility or ease of gathering.

- Avoiding being data driven: existing data may be gathered and verifiable but it may already embody a set of assumptions that make it inapplicable to the case at hand.
- Involvement of external expert in definition of what counts as good practice and what kinds of indicators may be able to effectively measure this activity.

Addressing the task in practice

In the case of the university-enterprise cooperation benchmarking group, the group faced the challenge of developing indicators which really reflected their interests whilst at the same time there were already substantial amounts of data gathered in some university systems, such as the AUTM and UNICO surveys in the US and UK respectively, the formal HEBCIS return to the UK funding councils, and the standard innovation indicators used by inter alia OECD.

The challenge for the group was in this case to understand the process actually underway, and seek benchmarks for those processes, rather than defaulting to the existing indicator set. The group modelled the university-enterprise cooperation in the round, from the first contact to the implementation of university knowledge in an enterprise setting. This is shown in figure 10 on next page. This enabled the group to identify three processes between the four interim states for which data was readily produced.

- Creating intellectual property from the research base that was ready to be exploited
- Exploiting that intellectual property through a series of connections to enterprises
- Strategically managing those enterprise connections to improve/accelerate the exploitation process.

This helped in turn to refine the understanding of the goal of enterprise cooperation, which is the development of strategic linkages with businesses which help create a particular volume of co-operative activity with enterprises, which helps sustain a university infrastructure that helps support and better manage other (one-off) business engagement activities. This is shown in figure 10 on next page.

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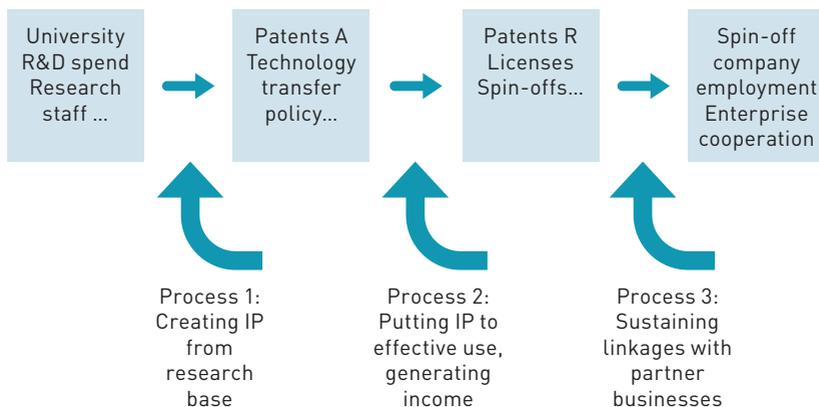


Figure 10 Fitting the list of potential indicators to the overall process – the case of university-enterprise cooperation.

Learning outcomes for participants

By the end of this task:

- The participants will have identified the kinds of areas where they need to produce indicators which they need to measure success.
- There will be a good understanding of what constitutes good strategic performance, namely what would a university that manages those processes well look like in practice.
- There will be a better understanding of each priority in terms of its decomposition into a set of steps, each of which have their own appropriate performance indicators.

Linking to the next step

The next step in the benchmarking process is agreeing a long list of indicators that forms the basis for developing the institutional scorecard.

6.1.4 AGREEING THE 'LONG LIST' OF POTENTIAL INDICATORS

Outline of task

This step involves agreeing a set of indicators which will be used to highlight relative performance levels, on which all the institutions see at least some relevance, and for which sufficient data is available to allow a degree of comparison. The basis for this stage of the process is creating a framework in which data is collected as evidence of performance. This allows a judgement to be made for each institution as to which level they are performing in. This stage concerns deciding the ground rules for the 'admissibility of evidence' for the judgement phase rather than coming up with data sets that will provide a definite answer.

Key issues arising

- Listing all the indicators available rather than identifying what good performance looks like and seeking indicators of that performance.
- A tendency to try to gather as much data as possible rather than to focus on gathering a sufficient breadth of evidence indicative of the particular level at which a university is performing.
- A lack of interest in institutional senior managers in remaining with the benchmarking process because of the elapsed time and the lack of immediately tangential results, downplaying the importance of the learning processes underway.
- A rejection of particular indicators for practical reasons such as availability, cost or political implications rather than identifying what are the ideal type indicators.

Critical success factors

- Taking the view of the process 'in the round' and identifying what good performance would look like as the basis for the kinds of indicators that might show it.
- An appreciation of the use of data as a means of indicating a particular performance, and the need to corroborate that to build up an overall picture of institutional performance.
- A good dynamic within the group, appreciative of each others' needs to help best develop and articulate the idea of what good performance would look like and what kinds of evidence might underpin that.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

- A willingness to develop a general definition of good performance applicable to all the group members, fitting with the differences between the institutions

Addressing the task in practice

The curriculum reform group operationalised their three priorities in terms of the available kinds of data which both helped to explain performance against the target as well as being reasonably available for most institutions, and sufficiently generalisation.

The group had already agreed that the desirable behaviour they were seeking to promote was in ensuring that the changes that were being delivered:

- to ensure compliance with the Bologna process
- also producing change in the behaviour and activities of universities,
- helping to support otherwise desirable outcomes such as better graduate employability and satisfaction, and
- were driven by good practices in institutional management rooted in continuous improvement of curriculum processes.

The following three priorities were agreed upon, along with a set of targets, and these led neatly to a long-list of indicators based on which a number of commonly agreed targets were defined. A selection of the indicators which were used are presented below.

Priority One: Defining institutional strategies for curricula reform

Target: Defining and implementing a strategy for curricula reform

- Defining mission and objectives
- Defining strategy, planning, processes and organisation for CR
- Assessing how the strategy works.

Priority Two: Advancing in the implementation of the Bologna process

Target: Improving the implementation of the Bologna process

- Learning experience (ECTS, learning outcomes, internationalization, recognition of prior learning, etc.)
- Performance (retention, drop-outs)
- Quality assurance (internal and external)

Priority Three –Enhancing employability in curricula

Target: Improving institutional strategies for employability

- At institutional level: career offices
- Competences for employability and entrepreneurialism
- Connections with employers: their role in curricula reform and mobility of students and teachers
- International experiences.

DATA	INDICATORS	Importance (scale 1-5)	Availability (scale 1-3)
Institutional level	What is the institution's vision and mission statement on curricula reforms?		
	What is/are the current strategy and development plans for curricula?		
	What is the institution's structure of study programmes		
Curricula development process	Process approach (different from course to course, programme to programme, faculty/department to faculty/department, unified)		
	Motivation (improvement, elaboration of new course/programme curricula, whole reform)		
	Objectives (Industry and community satisfaction with courses/programmes, professional status and recognition of programmes, learning outcomes, student and graduate satisfaction with teaching, optimisation of resources for programmes/courses)		
	Existence of curriculum development coordinator or adviser		

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Assessment and quality assurance	Evaluation of the curriculum development process.		
	How often do you undertake a review of curricula?		
	Availability of evaluation results and recommendations to stakeholders		
	Benchmarking curricula with other institutions		
	Quality assurance procedures for the whole study programme		
	Percentage of programmes accredited by professional bodies		

Learning outcomes for participants

By the end of this task:

- Senior managers in the participating institutions have agreed in outline to the approach adopted by the group, and that it fits with the overall institutional strategic perspective.
- Benchmarkers are aware of which elements of the overall benchmarking process and which variables are applicable to their own institution, and which are not, along with the reasons why they are not applicable.
- The group have identified a coherent idea of the kinds of evidence that would make an informed judgement as to the relative performance of an institution in that particular area.

Linking to the next step

The next step in the benchmarking process is the development of the benchmark. 'The Benchmark' is the definition of the best possible performance, and then on the basis of this, participants seek to distinguish between qualitatively different performance levels using the performance indicators developed in this section as the evidence base for distinguishing between these levels.

6.1.5 DEVELOPING EXPERTISE LEVELS AND SCORING

Outline of task

In this phase of benchmarking, the task is to take the agreed long list of indicators, and for each of those indicators, agree what represents performance at each of the four possible expertise levels (basic, standard, good and excellent). This involves developing a set of decision-rules that provide a means to distinguish, on the basis of evidence offered, between different performance levels.

Key issues arising

- For one single indicator, there may be qualitatively different kinds of performance at the different expertise levels – performance alone does not normally indicate excellence, but it will be accompanied by other process and strategic evidence.
- Quantitative data is necessary to demonstrate standard and good performance, but qualitative data is necessary to distinguish between the upper performance levels. Too many qualitative benchmarks run the risk of allowing the subjective elements to dominate, turning benchmarking into more of an internal review exercise.
- Absolute quantitative scores create disagreement between partners (e.g. numbers of spin-off firms created), particularly in different kinds of institution: either partners need to agree this in advance, or use ratios, direction of change and percentage changes to create fair benchmarks.
- The key task of the benchmarking facilitator is to understand the processes with which the benchmarking is concerned, to identify and exploit expertise to differentiate between different levels, and bring about agreement between partners.

Critical success factors

- The basis for this stage is identifying on the basis of the comparators what the 'benchmark' performance is – what would be the ideal outcomes delivered from this situation, and what might be the inputs, processes and outputs that deliver those outcomes which in turn contribute to delivering overall institutional goals.
- The main success factor in this stage is the willingness of universities to accept variables and levels in the process as a whole which are not necessarily directly relevant to them or for which direct data is not immediately relevant.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

- The better the processes have been mapped and placed in context in the preceding stages, the easier it is to develop a comprehensive benchmarking approach.
- Institutions who are prepared to accept that in some areas their performance may be 'only' satisfactory is necessary in order to achieve consensus between the partners.
- The benchmarking facilitators should continually make clear to participants that they will be free to reject any of the variables at a later stage in the process as long as they are clear why those variables are not relevant for them (for example research income variables for universities of applied science).

Developing expertise levels in practice

For each of the variables identified (targets), performances are identified which correspond to the four performance levels. These may for example be grouped together making a level of performance indicated by fulfilling a majority of criteria in particular areas. In the case of the University-Enterprise Cooperation group, for one particular priority, the four levels were distinguished using a simple decision rule.

Priority: Increase institutional strategies for partnership in R&D, Continuing Professional Development (CPD) and joint development of regional infrastructures

- For HEIs with a **basic** performance in university-enterprise cooperation, the majority of these variables will have remained static in the last three years.
 - Amount of commercial income from R&D
 - Number of students' theses in cooperation with enterprises
 - Number of students in CPD Programmes
 - Number of start up companies and entrepreneurs nurtured by the University (including incubators)
- For HEIs with a **standard** performance in university-enterprise cooperation, the majority of these variables will have increased substantively in the last three years.
 - Amount of commercial income from R&D
 - Number of students' theses in cooperation with enterprises
 - Number of students in CPD Programmes

- Number of start up companies and entrepreneurs nurtured by the University (including incubators)
- For HEIs with a **good** performance in university-enterprise cooperation, the majority of these variables will have increased substantively in the last three years.
 - Amount of commercial income from R&D
 - Number of students' theses in cooperation with enterprises
 - Number of students in CPD Programmes
 - Number of start up companies and entrepreneurs nurtured by the University (including incubators)
 - Number of visiting chairs (people from industry)
 - Number of sponsored chairs (professors sponsored by companies)
- For HEIs with an **excellent** performance in university-enterprise cooperation, the majority of these variables will have increased substantively in the last three years.
 - Amount of commercial income from R&D
 - Number of students' theses in cooperation with enterprises
 - Number of students in CPD Programmes
 - Number of start up companies and entrepreneurs nurtured by the University (including incubators)
 - Number of visiting chairs (people from industry)
 - Number of sponsored chairs (professors sponsored by companies)
 - Number of strategic partnerships
 - Number of Training framework contracts (CPD)
 - Number of corporate networks/clubs with membership fees (i.e. Networks for enterprises hosted by University)
 - Number of courses paid by companies
 - Percentage of business teaching
 - Temporary entrepreneurial positions in the University
 - Number of framework agreements for renting and sharing equipment (minimum 2)
 - Number of multimodal agreements (relation with enterprises for research, teaching and consultancy) (minimum 2)
 - Number of Innovation Knowledge Houses.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

The way the decision-rule is applied in practice is depicted in simplified form in a flow-chart overleaf. One of these decision rules is drawn up for each of the priority areas under consideration, so there will typically be between three and six of these decision-rules for each benchmarking group, and each institution is scored against all the decision-rules. This is shown in figure 11 below.

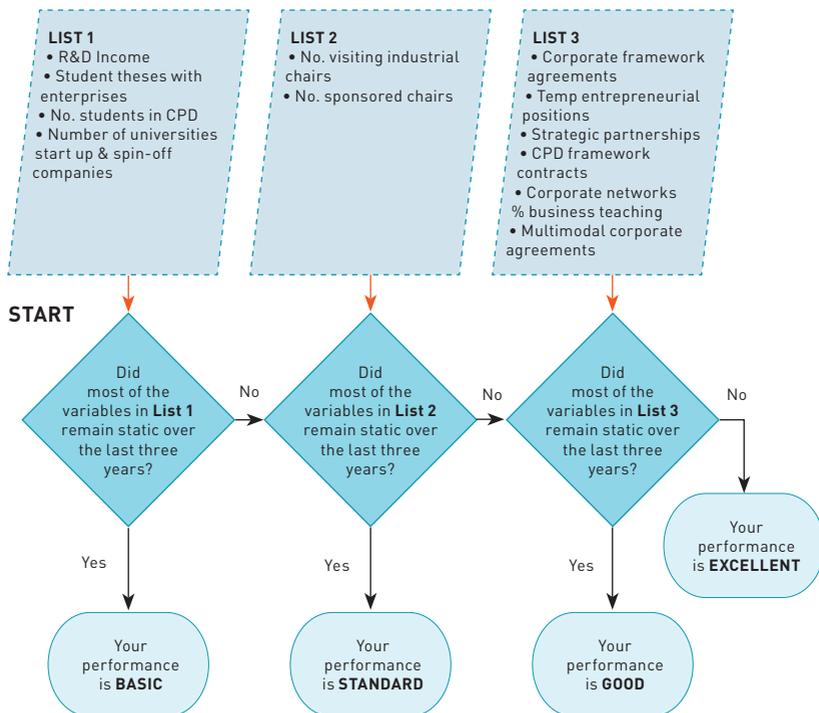


Figure 11 The decision rule flow-chart for the UEC Priority “Increase institutional strategies for partnership”

Learning outcomes for participants

By the end of this task:

- The group will have agreed a set of expertise levels which define overall and detailed performance for the focus processes with which the benchmarking group is concerned
- Individual institutions will have agreed that the overall set of processes agreed in 2(a) above are pertinent for them in general, and that they are willing to implement a set of them in the institution, as well as understanding which processes are not immediately relevant for them
- The benchmarking co-ordinator will have involved external expertise and advice as necessary to ensure that the group have access to a wider perspective on the processes concerned than those emerging purely from within the collaborator set.

Linking to the 'balanced scorecard'

The next step in this process is ensuring that there are sufficient indicators covering all kinds of output, namely input, process, output and outcome, and developing a 'balanced scorecard' for the benchmarking indicator

6.1.6 CREATING THE 'BALANCED SCORECARD'

Outline of task

This step involves taking the list of indicators agreed with the institutions, and ensuring that they cover the whole process cycle, from inputs to outcomes, and therefore provide the broadest perspective on understanding performance.

Key issues arising

- Over-representation of process and output variables because input and outcome variables are much harder to measure
- Failure to have a good balance of qualitative and quantitative indicators which point to a performance level.
- Failure to make the shift from a collective to individual institutional process, and in particular to make the shift in the way of working to develop a scorecard that captures what the institution wants to achieve.
- A failure by individual institutions to take ownership of the benchmarking scorecard and appreciate that at this moment it has to be applied to particular individual institutional circumstances.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Critical success factors

- Developing a scorecard that captures the essence of the institution's strategic interest in this topic, with a set of measures and evidence corresponding to different performance levels that allow the institution to be dispassionately judged.
- Individual institutions making a shift in their relationships from trying to achieve consensus to being each others' critical friends, helping with the development of the institutional balanced scorecard and providing feedback on the kinds of evidence which may be applicable.
- Experts and group co-ordinators working on a more individualised basis to help the institutions to take ownership of the activity and produce a framework which allows the institutional performance to fairly be adjudged.

Addressing the task in practice

The lifelong learning group developed a model that explains the increasing degree of individualisation in the project. The early stages of the project involve a great degree of group interaction – towards the later stages of the benchmarking process, the lessons which have been collectively learned have to be applied to measure and interpret the performance of the individual institution.

This step is the first point in the benchmarking process where the institutions are meaningfully operating independently from one other. Although at earlier stages, the universities were trying to ensure that their own interests and concerns are represented in the discussions, it was in this stage that for the first time the universities work on their own and without the immediate peer support of the benchmarking group. The institutions needed to be clear that they were happy with the choice of indicators and had a high degree of confidence that they could obtain sufficient information across the indicators to come to a reasonable and informed judgement about their relative performance and position.

In the lifelong learning group, they used the expert to work on a more individual basis with each of the participants and rather than trying to achieve consensus about the right way forward, the expert became involved in a set of bilateral discussions with the universities about how they could apply the scorecard to their own institution.

For the lifelong learning group this lesson – knowing the right time to make the shift from collective to individual group action – was so important that the group leader produced a diagram demonstrating the shift from collective to individual action over time. The issue for the group here is that this stage requires a change in the mentality of the working – before this point there is a need for consensus – after this point, the activity is more individualised. This is shown in figure 12 below.

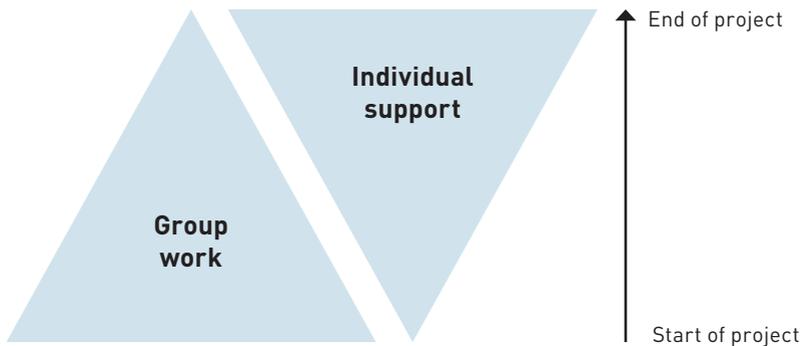


Figure 12 The shifting balance between group work and individual support in a benchmarking group and the need for a change of behavioural emphasis

Source: Brandenburg (2010)

What this diagram also indicates is the level of benefit for the participants – at the start, the group is the place where the learning takes place as the group define the benchmark and targets for their particular priority areas. Over time, the individual benefit to the institution increases, and becomes evident from the point that the institution is scored, and the benchmarking exercise helps with the development of a relevant and supportive action plan.

Learning outcomes for participants

By the end of this task:

- The individual participants will have produced on their own initiative a score-card which reflects the indicators agreed with the groups covering the range of variables and process steps which have relevance to their own institutions.
- Individual institutions are clear which of the variables they are not going to measure or evaluate, and there is a rationale for that selection which links

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

primarily to the nature of the institution rather than to pragmatic questions of data availability or producing 'favourable' results.

- The benchmarking group co-ordinators are working on a bilateral basis with the individual institutions, and helping to exchange indirectly experiences between the participants in developing their own scorecards.

Linking to the next step

The next step in the benchmarking process is finalising the indicator set and the scorecard with institutional senior managers; it is important by this stage for those running the benchmarking exercise to have a clear overview of why it is relevant to the institution to continue with the benchmarking work.

6.1.7 FINALISING THE INDICATOR SET WITH SENIOR MANAGERS

Outline of task

Once the balanced scorecard has been developed in a practical sense, it is necessary to ensure that the participating institutions all agree at the managerial level commissioning the benchmarking, that the indicator set and the scorecard make sense and are applicable from their specific institutional perspective.

Key issues arising

- The similarity between the scorecard and the long-list of indicators can lead individual participants to take this step rather lightly, and fail to ensure that the scorecard captures what matters to the individual institution in terms of strategic improvement.
- If the scorecard has developed away from the direction of interest to the senior managers, and from what is strategically important to the respective institutions, then it can undermine senior support for and commitment to continuing the benchmarking process to its conclusion.

Critical success factors

- A scorecard which fits with the strategic interests of the university, and which can be seen as offering insight into the problems which the university are facing at that time.
- Making clear to senior managers that it is perfectly acceptable to reject the use of some indicators as inappropriate provided that that rejection is recorded and explained in terms of the relevance to the institutional situation.

- Encouragement from key stakeholders outside the university that the benchmarking remains an important task to complete, and that the results will influence the stakeholder support for the university in the future.
- Building a group within the institution that can gather data and provide answers to questions within the benchmarking process, and are able to work together effectively to provide an institutional perspective on the data.

Addressing the task in practice

The Curriculum Reform group had developed an extremely lengthy 'long list' of indicators, which were found to be extremely time-consuming to gather (see 3(d).) In response to this, the Benchmarking Exercise managers went back to their institutions to consult with their senior managers for feedback and approval to continue their participation in the Benchmarking Exercise. In the course of those consultations, it became clear that there had to be a much shorter and much more incisive indicator set, and therefore the response from institutional senior managers was fed into a revision of the benchmarking tool that was much more concise. A number of qualitative and quantitative indicators and benchmarks were defined for each target and indicator.

Target 1: Developing mission driven curricula	
Indicators	Benchmarks
The university has defined clear mission statements.	All study programmes have a well defined profile according to the mission of the university and its objectives The target groups for the curricula are clearly identified.
The university has formal structured procedures for regularly evaluating and reforming the curricula	Organisational structure exists with clear division of tasks and responsibilities. The university has a continuous and comprehensive model for programme review which includes information from and to stakeholders. The university has a well established system for identifying opinions, expectations and students characteristics The university has a well established system of graduate's follow-up which it is used as feedback for improving the learning experience and the employability of graduates.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Target 2. Supporting student centred learning	
Indicators	Benchmarks
Study programmes are defined by LO (%)	100% of the study programmes are defined by LO, which is included in the DS
The learning and teaching process is LO based at module level (%)	100% of the modules have defined LO aligned to programmes LO A matrix exist that map module LO and the program LO.
Students assessment is based on LO (%)	100% of the study programmes assess students LO
Target 3. Developing employability skills	
Indicators	Benchmarks
Percentage of study programmes which explicitly enhance the generic competences for promoting employability	All study programmes incorporate generic competences in the T&L process and in the students' assessment. A generic competence matrix exists for each study programme
Percentage of programmes bases on problem solving or equivalent modes	All relevant programmes incorporate problem solving or equivalent T&L modes A matrix exists mapping the different T&L mode in the study programmes
% of students having for -credit work placement or civic engagement in the study programme	All bachelor programmes incorporate for -credit work placement or civic engagement All relevant post-graduate programmes incorporate for -credit work placement or civic engagement

Learning outcomes for participants

By the end of this task:

- The institutions will have agreed the benchmark to which they are working and have assembled a team to gather the data and score the institution.
- The expert will be aware of the key challenges and limitations necessary to effectively calibrate and refine the benchmark for the scoring process.

Linking to the next step

The next step in the benchmarking process is the scoring process, where the institutions go and gather data and use it to populate the scorecard they have developed, and from that to analyse the overall institutional situation.

6.2 'SCORING' THE INSTITUTION

This stage in the process involves the gathering of data and converting it into evidence which indicates the relative performance of the institution against the benchmark. As with the whole process, it is important to emphasise that this is not a routine or mechanical task. The data that is gathered can only give a partial picture of the institutional performance, and it is therefore necessary for the participating institutions to think openly and honestly about how they believe they perform, using that data as evidence to position themselves on the performance spectrum. Once this has been done, it is possible to analyse the relative strengths and weaknesses of the institution, and from there to develop an action plan.

The vital success factor in this stage is the independence and objectivity of the scoring exercise. Institutions have a high degree of freedom to score themselves as they see fit. It can be tempting to score overly generously, which creates problems at a later stage because it makes it very difficult to see where performance can be improved. In the preceding stages, the partners will have discussed with each other and with the expert the overall benchmark, and examples of what counts as which kind of performance level. This will partly be recorded in terms of the indicators, but it is necessary to interpret indicators. In the scoring process, it is therefore necessary for the participants to be as candid as possible about their performance and to think honestly about where they are positioned.

As part of this, it is necessary to be discrete about the use of data, and the examples that are provided in this section relate to a hypothetical example of university-enterprise cooperation which nevertheless illustrates the practical considerations for the individual benchmarking institutions when seeking to score their institutions and develop an action plan.

By the end of this stage, the individual institutions will have gathered all the information and data necessary to compare themselves against the benchmark, potentially with reference to the other benchmarking group members, and will have a clear sense of their relative performance against the benchmark.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

6.2.1 GATHERING AND VALIDATING THE DATA

Outline of task

The first step in the scoring process is for each institution to complete as far as possible the scoring matrix, and to provide as much evidence as possible, data for quantitative indicators and reasoned explanations for qualitative indicators, involving stakeholders from across the university in verifying the institutional scores for qualitative data.

Key issues arising

- A tendency to overestimate the quality of existing processes, and to equate internal performance with those of the benchmark, despite a lack of evidence underpinning that performance.
- A tendency to give bald answers (yes/no) which lack sufficient contextual depth to be challengeable by peers and experts and which can give confidence in the subsequent decision-making process.
- A failure for benchmarking project leaders within institutions to seek assistance and views of others within the institution, and to benchmark on basis of own perceptions rather than drawing on knowledge throughout the institution.

Critical success factors

- Gathering a group of individuals to either assemble the data or to interpret and validate the assessment of that data made by the benchmarking team, and ensure the scorecard gives a valid representation of the institution.
- A willingness to provide as much information as possible about institutional performance, particularly for qualitative or threshold questions, including negative positions.

Addressing the task in practice

This task is relatively straightforward. There will be for the various priorities a scorecard in which data can be recorded against the various levels of performance. The universities fill in as far as possible the data, to explain where their performance lies, and to provide some evidence or justification for that.

The figure below shows the scorecard from one of the institutions in the university-enterprise cooperation group. The scorecard illustrated here is for the target 'permanent dialogue with enterprises to promote knowledge exchange'.

Because the institution has fulfilled the criteria for excellent performance in this area, the evidence is provided in the scorecard as to how that excellent performance is fulfilled. The data provided refers to existing strategies, behavioural routines, events and policy documents.

The data was assembled by the benchmarking project leader, but was validated using staff members at the institution who were also aware of the project and had discussed the scorecard during the preceding project stage. They were able to confirm that the judgements of the individual and the data provided were valid.

PRIORITY TWO -Target three			
Knowledge exchange (Research, Teaching, Consultancy) - Permanent dialogue with Enterprises			
LEVELS	Indicators	Yes/No	Description
Basic	No dialogue	NO	
Standard	Random, opportunistic dialogue	YES	
	Dialogue with Enterprises for formal/legal reasons (external board members required by law)	YES	Required by law to have representatives from enterprise sector in HEI management
	Consultation of Enterprises limited to recognition/accreditation purposes	NO	Not only for recognition/ accreditation purposes but also for development of curricula
	Occasional good practices of a dialogue with Enterprises	YES	
Good	Multiple levels of a dialogue with Enterprises (executive board, faculty board, board of a specialised centre/unit)		
	Think tanks	NO	Depends how think tanks are defined -in some extent, maybe
	Systematic structures supporting the dialogue with Enterprises	YES	Dialogue with enterprise systematic in curriculum development and evaluation of competences

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	Continuous evaluation of the benefits of a dialogue with Enterprises	NO	Evaluation of benefits of dialogue recognized
	Meaningful enterprise consultation for course input and across the institution	YES	
Excellent	Integrated strategy for a dialogue with Enterprises	NO	Strategy not integrated yet
	Active management of enterprise input in various processes	NO	Management is not active
	Membership of University-Enterprises foresight activities	NO	In some extent -perhaps
	Existence of a conflict of interest policies	NO	Case by case -not a policy

Figure 13 The completed matrix for University-Enterprise Cooperation

Figure 13 shows some important points:

- As much information as possible is provided which helps to give some explanation of the institutional performance.
- There is a clear sense of which level does the university perform at: it is clearly a good institution with some excellent features in the basis of the data provided.
- Where data has not been available then it has been made clear that the information is not known.
- Where there is data not being provided, it is made clear why this is so – in this case because it is not legally possible for the university to have equipment sharing contracts, and therefore it has been decided to exclude the indicator from further consideration.

Although it is not necessary to check all the evidence presented, the completion of the score-card should make it as easy as possible for the experts and group leaders to check that the statements included in the score are correct, and that the evidence provided corresponds to the level chosen.

Learning outcomes for participants

By the end of this task:

- The individual institutions will have a thorough oversight of their performance against the performance criteria
- The individual institutions will be ready to justify and defend those choices if challenged on them.
- Peers/ comparators will be in a position to comment constructively on the way that the scoring process has taken place, to challenge the way scoring has been undertaken within the group, and encourage individual institutions to think more critically about their scores and whether they have other evidence which would corroborate other scores.

Linking to the next step

The next step in the benchmarking process is scoring the institution against the benchmark, collating all the data from the various stages of the process and the priorities and targets, to create an overall picture of the performance of the institution within the domain area.

6.2.2 SCORING THE INSTITUTION AGAINST THE BENCHMARK

Outline of task

The next step in the scoring process is to compare the data against the benchmark, and see where the university is performing in each of the target areas. Therefore, for each of the target areas the university draws up a scoring chart which shows where the data suggests they are performing for each of the variables, at each stage of the process (input, process, output, outcome).

Key issues arising

- A failure to interpret the 'story' being told by the benchmarking data to create an overall picture of institutional performance, capturing both strengths and weaknesses, whilst identifying where uncertainty remains.
- A tendency to overestimate the quality of existing processes, and to equate internal performance with those of the benchmark, despite a lack of evidence underpinning that performance.
- A failure to appreciate where the institution really lies on the benchmarking curve, giving it the higher rather than the average value on the basis of a judgement of institutional performance.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

- Regarding indicators as targets, and low scores in particular areas as implying that action needs to be taken to improve the overall score.

Critical success factors

- A willingness to be realistic in interpreting the data and accepting that performance will be mixed, with the key to performance improvement being eliminating the weaker aspects.
- A fair sense of how the institution is performing and a willingness to seek out additional evidence if the score seems grossly inaccurate given what is known about the institution.
- A willingness to adapt the common sense understanding of performance in light of the data unearthed.
- Involving key institutional stakeholders in validating the way the data and evidence is converted into scores (e.g. key commercial partners for university-enterprise cooperation, funding agencies for governance, student focus groups for curriculum reform) to challenge scores and analyses, validating the internal scores against stakeholder perceptions.

Addressing the task in practice

For each of the targets, there will have been developed a scoring grid, which for each of the levels, will have data which indicates whether or not the university performs at that level. This task involves bringing all the data together in a way that is easily understandable.

One way to approach this is to plot the data on a graph which indicates the level at which the institution performs for each individual data set. Figure 14 below shows how this could be done for a priority area in which the benchmark involves gathering performance data for 19 items. For each of the data areas, the performance suggested by the data item can be plotted on a map which then summarises for the priority the overall institutional performance.

Figure 14 Mapping institutional performance for a priority area with 19 data items

Excellent	•			•	••
Good	•••	••	•	••	••••••••
Standard	••	••	••	•	••••••
Basic	•		•		••
	Input	Process	Output	Outcome	Overall

In figure 14 above, for example, this suggests that the performance of the institution overall against the target area is standard, with some examples of 'good performance', or 'good' with some slightly less strong elements.

Figure 14 shows that the benchmarking is not unambiguous and requires interpretation, because there can be pieces of data that suggest that institutional performance is at different levels.

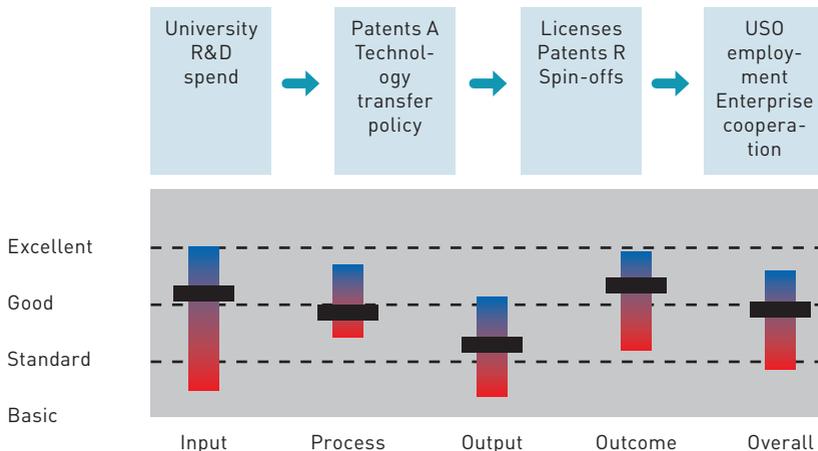


Figure 15 A simplified illustration of how indicators translate into the scorecard in university-enterprise cooperation

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Figure 15 on previous page represents this data from figure 14 graphically, using a hypothetical example of the UEC process to indicate how indicators from a particular target, in this case improving business interactions and use of university knowledge, can be used to map how the institution performs in that area.

Learning outcomes for participants

By the end of this task:

- The individual institutions have a clear sense of how they perform against the targets set in decision-rules for each of the priorities.
- Through a dialogue with key stakeholders, comparator institutions and experts, the individual institutions will appreciate the validity and objectivity of the scores given against the decision-rules.
- Comparator institutions are involved in commenting on the scoring process, and have reflected on and modified their own scores in the light of comments provided by peer institutions and where appropriate or available, by external comment or reviewer.

Linking to the next step

The next step in the benchmarking process is the analysis of the main institutional strengths and weaknesses, and the development of an action plan to address those strengths and weaknesses which also builds on something that the university already wishes to achieve.

6.3 ANALYSIS AND ACTION PLANS

The next stage covers the individual steps which the institutions take by themselves, under supervision of the benchmarking facilitator, and with the potential reward to be cited as examples of best practice, to address the issues identified and to drive strategic change, linked to the information gathering exercise. In this phase, there is a second shift in the roles of the members of the benchmarking group.

There is far greater individualisation of the institutions, with institutions required also to act more autonomously and for the first time in the exercise to make judgements about their own institutions and what is sensible. This can be made difficult if there are strong tendencies within the institution towards particular kinds of action. The key challenge for institutions is a willingness to dare to fill in scores and provide evidence which points towards a performance level without either resisting and claiming data unavailability, or over-exuberance, claiming a strong performance on the basis of data that does not support that position.

The role of the benchmarking group also changes, towards being more of a peer support and mentoring group; if there are meetings in this period then the role of the group is not to hold the universities to account in terms of their evaluation of the institutional performance and the overall scoring. Rather, the more important task at this stage is the stronger universities who are further in the scoring process to show the less advanced institutions that it is possible to benchmark, and to provide a strong example that it is acceptable to use one's own judgement in the benchmarking and scoring process.

By the end of this stage, the individual institutions will have identified a project which is strategically important for the institution and can serve as a means to address the weaknesses identified in the benchmarking analysis, modified that strategic project to deliver those changes, and have a clear business plan to ensure that the project delivers the changes identified as important through the benchmarking exercise.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

6.3.1 DIAGNOSIS OF INSTITUTIONAL STRENGTHS AND WEAKNESSES

Outline of task

For the identified and chosen target area, the target score is used to develop an understanding of where the strong and weak points in that process area are, which strengths are to be built on and which weaknesses to be addressed. For example, in the example shown below, the main areas of concern are around the outputs, and in converting relatively high levels of input and solid processes into measurable outputs.

Key issues arising

- Interpreting the data too rigidly and identifying an area of action which does not fit well with the strategic emphasis of the institution
- Disregarding the data too far with the result that the benchmarking plays no role in the identification of the area for strategic action
- A failure of communications between the benchmarking team and the university senior managers in explaining why a strategic development project must be approached in a particular direction.

Critical success factors

- A good sense of self-awareness of what the institution's capacities and capabilities are and where there are opportunities for improvement
- Reflexivity and responsiveness to constructive criticism implied by scoring below the level of the benchmark
- An ability to appreciate criticism as a constructive element of a cycle of continuous improvement that strengthens rather than weakens the institution as a whole.

Addressing the task in practice

The key to the success of this step is to identify which are the areas where the institution needs to focus – for each of the priority areas, an average (overall, see above) score can be generated to identify which of the areas needs the greatest focus, (see below), or the institution may have itself already decided to focus on a single target area, which is then the basis for the action planning process.

In the example below, again a hypothetical UEC example, the performance measurement is derived for each of the six UEC priorities. In the example, the graph suggests that Target 3 is the weakest performing area of the university, and therefore should be the area of focus. This is shown in figure 16 below.

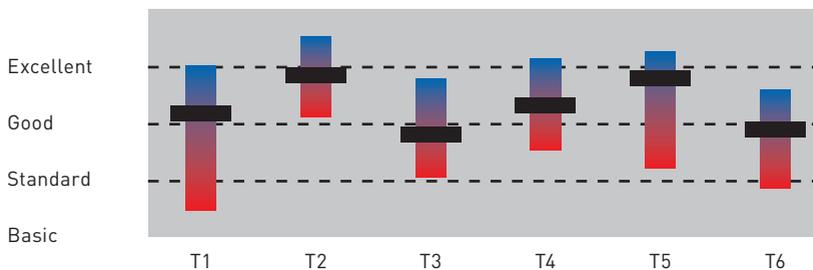


Figure 16 Identifying from the target scores the appropriate area of strategic focus

However, it is important to emphasise that this is not a mechanical process, and the university has some discretion in choosing which target area to focus on for improvement. In the above example, there is weak evidence to suggest that improvement should focus on targets two or five, whilst it would seem more reasonable to focus improvement on targets one, three or six.

Making the choice – in this case between the three targets – is a choice that has to fit with the strategy of the institution. For UEC, in the benchmarking exercise there are six targets:

- Target 1: Increase institutional strategies for partnership in R&D, CPD and joint development of regional infrastructures
- Target 2: Knowledge exchange for students' employability - Joint projects
- Target 3: Staff Exchange between the University and the Enterprise and vice-versa
- Target 4: Knowledge exchange- Permanent dialogue with Enterprises
- Target 5: Data collection and use - Institutional level
- Target 6: Collecting information and measuring impact on external environment.

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The example university here has decided as a matter of strategic priority that it wants to improve its commercialisation infrastructure to increase research and consultancy with regional businesses. In such circumstances, it would be reasonable for the university to choose to focus on target 1 as the area for strategic improvement.

Once that area has been chosen for strategic improvement, then it is possible to return to the detailed benchmarking data for that target, and consider what is the message emerging from that data.

Figure 17 below repeats the data for target one, being chosen for strategic improvement because it is already a strategic priority of the university. The data shows that in terms of the overall performance process, there is a dip between the process and the output stages.

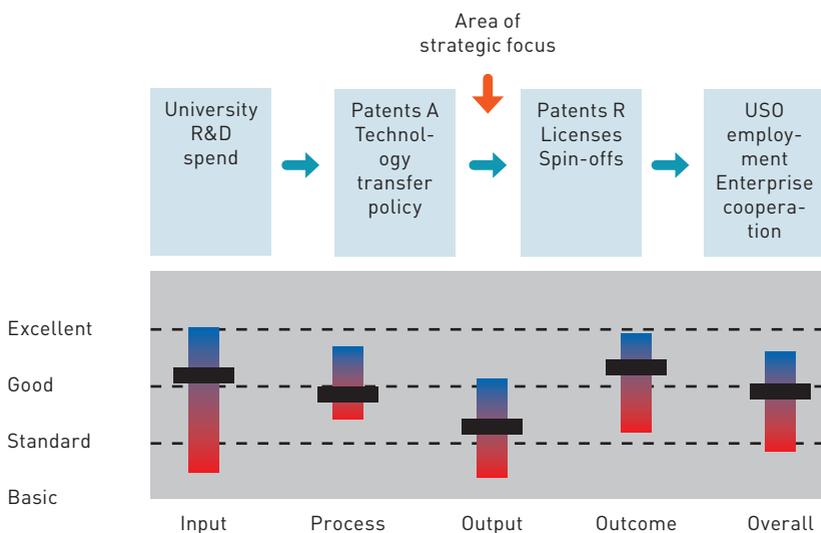


Figure 17 Using the benchmarking data to identify the area of strategic focus for improvement

This can be interpreted as despite a relatively high performance in terms of the internal processes for the management of IP, the weakness is in the conversion of that activity and processes into outputs which subsequently generate income for the university. This suggests that – given the performance scores of the university and its strategic interest in commercialisation, conversion of IP into cash flow could be a sensible focus for an action plan to improve institutional performance.

Because benchmarking is not a mechanical process, and therefore some creativity is necessary to use the results of the exercise to maximise the institutional benefit. The University of Salford participated in the Governance group. As a relatively experienced member of the group, it found that its performance was amongst the best of the participants. The particular area that it chose to focus on was “Student experience does not meet with student expectation, translating through poor satisfaction expressed in NSS and other surveys, into adverse brand reputation and assessment.” This was identified through its Risk Register as one of the top six risks facing the university, and not through the benchmarking exercise. What Salford therefore chose to do was to create an action plan that fitted with the four areas that had been identified in the Governance group, namely Transparency, Decisiveness, Legitimacy, and Ownership / Accountability. The purpose of the Benchmarking Exercise from the Salford perspective was therefore to give additional insights – a broader perspective over – the issue of governance, and to help them understand the principles that should underlie effective institutional risk management.

Learning outcomes for participants

By the end of this task:

- The individual institutions will have analysed their benchmarking data to derive an appropriate and reasonable area for strategic improvement, and will have used the benchmarking data to further target and refine their improvement activity.
- Individual institutions may have consulted with key stakeholders, comparator institutions and external experts to validate their analysis and decision-making to generate a certainty that their analysis is reasonable and objective.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Linking to the next step

The next step in the benchmarking process is developing an action plan for an activity already planned or underway in the university, using the project's existing momentum to help support the success of the performance improvement project, and to ensure that the project remains strategically important to the institution.

6.3.2 DEVELOPING AN ACTION PLAN AROUND PILOT PROJECT

Outline of task

The next step is to develop the idea of a pilot project. The challenge is to select a pilot project which is both small enough to be achievable given that it is likely to be a radical change within the institution, as well as large enough to achieve an impact at the level of the institution to contribute to strategic institutional development. Part of this task is a project management task – this *Handbook* is not intended to provide a step-by-step guide on how to manage and implement change programmes within universities.

Therefore, this step assumes that the project will be managed in a sensible way that conforms with an ISO9000 process guaranteeing that outcomes conform with initial processes. What follows in the next two steps are a set of **additional project management considerations** to ensure that the delivered project also contributes to strategic performance improvement within the institution.

Key issues arising

- Selection of a project which is too ambitious and for which the institution has insufficient experience to successfully deliver.
- Selection of a project which is too modest and small scale to contribute to a wider institutional process of strategic improvement.
- Badging an existing project as contributing to addressing a particular strategic interest or target without modifying the project to take account of the benchmarking exercise.
- Imposing new targets or missions on existing projects as a result of the benchmarking exercise, for example by imposing performance indicators as project targets.
- A tendency to draft too general an action plan encompassing many areas and lacking focus because of a lack of certainty over where the real focus areas should be.

Critical success factors

- An action plan that identifies the general challenge in terms of improving performance levels of the target, and a specific improvement that will deliver that performance improvement.
- Finding an avenue for an action plan that is close enough to the university strategic interest but retains enough salience for the overall benchmarking topic.
- Producing a plan which sets out a future vision for the university once the change has been achieved, and provides the resources and the direction for the changes necessary to deliver those changes.

Addressing the task in practice

The most critical element of this stage is developing an action plan which is tied to the necessary resources for its implementation, which generally requires support from senior managers, and lies out with the general responsibilities of the benchmarking team. For all the four benchmarking groups, the following outline served as the basis for developing the action plan. The action plans were typically three or four pages in length, and including a GANTT chart which set out the timings, critical milestones, resources and other considerations necessary for the project to succeed.

- Context (e.g. Why do you want to get active in this specific area from an institutional point of view, relation to the benchmarking project)
- Overall objectives/ targets and specific aims of the planned action (What do you want to achieve?)
- Actions to be carried out for implementation (How will you go about achieving them?)
- Resource allocation
- Timeframe of the planned action (overall period, shorter intervals)
- Expected outputs (including the definition of milestones against which you can measure progress)
- Expected success factors or barriers in implementing the action
- Stakeholders of the action (internal and external)

The experts were made available to comment on the action plans of the participants who made it to this stage and submitted an action plan. For the governance group, the initial action plans were very general and lacked

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

focus, so after a round of comments from the experts and from peer comments, there was a second round of action planning where revised plans were submitted.

One of the Curriculum Reform group decided to create an action plan on ensuring that institutional evaluation procedures both encourages and rewarded curriculum planning that was compliant with the Bologna process. This came out of the CR group's Target 1, Developing the mission driven curriculum, and the specific area "formal structures for evaluating the curriculum": (see 3(g), reproduced below).

Indicators	Benchmarks
The university has formal structured procedures for regularly evaluating and reforming the curricula	Organisational structure exists with clear division of tasks and responsibilities. The university has a continuous and comprehensive model for programme review which includes information from and to stakeholders. The university has a well established system for identifying opinions, expectations and students characteristics. The university has a well established system of graduate's follow-up which it is used as feedback for improving the learning experience and the employability of graduates.

Having identified this as a priority for the institution, the Action Plan broke this overall task down into three sub-areas:

- Formulation of tangible standards and principles for curriculum reform
- Implementation of formal structured procedures for developing and reforming curricula based on these standards and principles
- Redevelopment of institutional evaluation procedures to fit study programme level

For each of these sub-areas, a detailed action plan was developed. For example, the action plan around the first area, Formulation of tangible standards and principles for curriculum reform, sought to identify internally what the institution should be aiming at in terms of Curricular Reform, and then enshrining them in the regulations and policies of the university. This then laid the foundation for the two subsequent stages, which sought to ensure those principles were implemented effectively in the university both

as policy but also in institutional working practices. The plan set out the goals, targets, milestones and deadlines for the implementation of the actions.

Time span	Participants / Actions
March 2010 1st Workshop curriculum reform	Stakeholders as stated above: Discussion and agreement on a draft of standards and principles for study programmes at Institution
April 2010 Submission of standards and principles to the Executive Board	Pro Vice Chancellor for teaching and learning, Institutional Quality Development Centre: Discussion of the results with the PVC (teaching and learning)
May 2010 Meeting of the advisory board for teaching and learning	Advisory board for teaching and learning: Commenting on the drafted standards and principles
June / August 2010 2nd Workshop curriculum reform	Stakeholders as stated above: Presentation of standards and principles, groups working on focal points
September 2010	Executive Board resolution on standards and principles

The final part of the action plan set out the data gathering which would be used to monitor the progress of the implementation and eventually to evaluate and review the extent to which changes had been successful. Monitoring was identified as being delivered through modifying/ improving existing monitoring activity in three areas, those improvements forming the third element of the Action Plan.

- Through the regular teaching evaluations, including sections on students' workload, module evaluation, study conditions
- Improving the alumni studies to return data of value at the institutional level.
- Improving the quality of the Institutional internal evaluations, by developing a new methodology, piloting and evaluating it in a single faculty.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

It is good practice at this stage (revising action plans) for partners to be clear as to where the plans have been modified, and how these improvements represent a response to the challenges, criticisms, observations and suggestions from the peer group and experts.

Learning outcomes for participants

By the end of this task:

- Individual institutions have developed clear action plans with resources, responsibilities and individuals to achieve a goal which is strategically important to the university and which helps improve the area identified through the benchmarking.
- Individual institutions have sought to validate their action plans by internal consultation and external verification to ensure reasonableness of their actions.
- The benchmarking group has developed a sense of good practice in the theme area and the kinds of priority projects which can help deliver strategic change.

Linking to the next step

The next step in the benchmarking process is the implementation of the action plan and then reporting back on that successful implementation: this step helps to ensure that there is institutional clarity that the plan has been developed in such a way as to further the institution's overall strategic goals.

6.4 IMPLEMENTING AND CONCLUDING THE BENCHMARKING CYCLE

The final stage of the benchmarking process involves making a set of changes at the level of the institution to the activities of the HEI informed by the understanding generated by the benchmarking exercise. This is the most fraught of the stages, and involves delivering informed change based on a rational appraisal of options drawing on the benchmarking data. Without the successful completion of this stage, then all but the most trivial benefits of the benchmarking exercise will be wasted. Yet this remains the most difficult of the stages to complete, because it is essentially an individual activity whilst the previous stages have been undertaken within a collective group, using experts, who have given peer support and review to the internal decision-making processes.

The biggest risk to successfully implementing change at this stage is that the exercise is forgotten and the strategic attention of the university or college moves to a different technique or approach without digesting the lessons to be learned from the benchmarking process. The first problem is that the action planning process may introduce external ideas that are resisted because they are seen as being external, alien, and somehow not appropriate to an HEIs culture or organisation. A second problem can arise if there is a change of strategic leadership, and in seeking to distinguish themselves from the previous regime, benchmarking can be symbolically discarded as something peripheral to the institution. A third issue can be if there are new crises or challenges that are not explicitly those dealt with in the benchmarking exercise, then the findings and activities can be seen as out of date and out of touch.

There can be occasions when a benchmarking exercise for some reason fails, and it is rational for no further action to be taken with the analyses and plans developed through the benchmarking process. However, there are also many bad reasons – such as those outlined above – which can lead to benchmarking outcomes being ignored. Before an institution chooses not to implement the activities and conclude the benchmarking cycle, the institution should be able to make a reasonable case as to why ignoring the exercise is the best approach. This can be done with the comparator institutions, and it can be useful for those completing benchmarking exercises to maintain

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

contacts with the other institutions involved for mutual 'moral support' as the process nears its close.

It is helpful in this final stage to find a platform where the changes that have been delivered can be presented to a wider audience. It is certainly useful to share experiences with government, policy-makers and other institutions. But having a platform to present the findings can also be a good incentive to keep going to the end, as well as providing feedback on the choices that an institution has made in the course of benchmarking, and suggestions for what might potentially productively be done differently in the course of a future benchmarking exercise.

By the end of this stage, a strategic change will have been delivered in the university, senior managers will have a realistic understanding both of how successful that project has been, and how effectively the institution currently performs before the improvement process began. Subsequent strategic management activities within the institution will be strengthened because of a better understanding of the HEI in terms of its strengths and weaknesses.

6.4.1 IMPLEMENTING THE ACTION PLAN

Outline of task

As the action plan is implemented, so the benchmarking becomes an increasingly historical activity, and there is a need to ensure that the project is configured to deliver the desirable strategic change, and oriented towards the issues identified in the benchmarking exercise. As with developing the action plan, good practice at this stage includes all aspects of good practice relevant to the delivery of a change in that particular domain area.

At the same time, from a benchmarking and particularly a continuous improvement perspective, the critical issue here is in ensuring that the project is delivered in such a way that seeks to address the performance issue identified in the benchmarking. This is the critical moment in the life of the benchmarking process: all the effort devoted prior to this stage has been to try and give the action plan the best chance of creating a project that improves the institutional performance. The benefits which can be achieved without successfully improving performance and making a strategic change are at best limited.

Key issues arising

- A shift in the strategic pressures facing the university so that the rationale for completing the improvement project are lost and impetus behind the project dissipates.
- The ambition of the intended change leads to difficulties in its implementation, and its abandonment along with any parallel ambitions for strategic improvement.
- An excessive concern with influencing the direct performance indicators rather than changing the institution so that the processes underlying the outcomes are improved.
- A shift in university senior manager leading to benchmarking and associated activities seen as being something old and outdated.
- A realistic acceptance of the trade-offs between speed, cost and quality in a project: if you want to increase speed, then either cost rises or quality falls (see figure 18 below)



Figure 18 Two of the three characteristics cheap, fast, high quality are possible

Source: Bethke (2003), p.65, improved by Benneworth/ Brandenburg

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Critical success factors

- Identify what the benefits of the project and the intended change are for the institution as a whole, and for particular constituencies within the university.
- Achieving agreement of key internal stakeholders, particularly academic constituencies, for the direction and speed of the change, by communicating the ideas effectively to these groups.
- Drawing on the expertise and knowledge of these internal groups, and providing opportunities for them to influence and support the project, including in a critical/ negative way where appropriate.
- Good pressure/ support from external stakeholders for a sense of urgency to complete the project and demonstrate that the universities have been able to improve their own performance and are progressing with the wider university reform agenda.

Learning outcomes for participants

By the end of this task:

- The individual institutions will have implemented a successful change project that has on the one hand improved the performance of a core university task, and at the same time demonstrated any potential value in further project activities for strengthening the universities' overall strategic position.
- Individual institutions will have an understanding of other areas where performance could potentially be improved, and understand the role of pilot projects in delivering strategic change.

Linking to the next step

The final step in the benchmarking process is to complete the strategic project, reflect on what has been learned overall, and decide what the appropriate next steps are. By the end of this step, there will be a plan for how to evaluate the efficacy of the benchmarking approach, presenting it to internal and external stakeholders and analysing whether the improved performance is qualitatively better than the situation prior to beginning the improvement process. It should be considered that even for a quite small process the implementation/action plan can be rather comprehensive. The more detailed the plan, the more likely that you will achieve the overall goals.

6.4.2 MONITORING IMPLEMENTATION AND REPORTING BACK

Outline of task

This is the final stage where it is possible for successful partners to come back together and share their experiences both with other members of the benchmarking group as well as in front of a more general audience, so the experiences learned by the institution in the course of the process can be used to drive a more general understanding of the strategic management of universities. This can at the same time be tied to a process where individual institutions seek to evaluate for themselves whether the particular projects have led to an improved performance of the domain under consideration.

Key issues arising

- A reliance on the originally identified performance indicators to monitor ongoing change, rather than evolution towards the 'benchmark's performance.
- The original performance indicators become targets, rather than the target being able to perform at the overall level and quality of the benchmark.
- Switching to 'broadcast' mode in any reporting back event, explaining how the project has improved performance rather than soliciting feedback on whether the project has improved performance.

Critical success factors

- A reliance on the originally identified performance indicators to monitor ongoing change, rather than evolution towards the 'benchmark's performance.
- Assembling a group of critical friends who can comment on the effectiveness of the performance improvement activity, and provide constructive suggestions about future directions of change.
- Using the comparator group to provide 'moral support' for the late stages of the process, and providing positive reinforcement for the value of a rational decision-making process based on objectively sourced evidence.

Learning outcomes for participants

By the end of this task:

- The individual institutions will have been clear about the relative success of their attempts to improve their institution, of their individual institutions' strengths and weaknesses, and have insights into the potential value of any subsequent round of benchmarking.

GOOD PRACTICE IN BENCHMARKING: FOUR STAGES, THIRTEEN STEPS

Linking to the next step

The next step in the benchmarking process is to return to the beginning of the continuous improvement cycle, and identify the strategic orientation for continuous improvement, and decide whether a benchmarking approach is the best approach to delivering that improvement.



AFTERWORD



ANNEX 1: DATA, INDICATORS AND PERFORMANCE INDICATORS: AN OVERVIEW

Data is a form of information that has been drawn together in a structure, and that structure represents a basic form of abstraction. What lies behind data is therefore a way of thinking about the information that influences what the data can tell you, and hence influences the use to which that data can be put. It is therefore necessary in benchmarking to ensure that from the start, the concepts and structures within the data used are compatible with the overall aims of the benchmarking exercise. In this appendix, we briefly explore the key issues which arise in using data in benchmarking, and relate benchmarking to the other ways in which information can be used in university management, including for ranking, resource allocation, accountability and performance monitoring.

THE CONCEPTUAL FRAMEWORK BEHIND THE DATA

The aim of any benchmarking exercise is to understand two things, performance and potential. By benchmarking, you want to understand how you are performing, and how you could potentially perform in the future if you address problems in the systems by which particular outputs are delivered. All data needs must be aligned with this issue, and that means clearly defining the process you are interested in, and then equally defining what is 'good performance' in the process you are interested in.

In a manufacturing plant, there may be simple headline goals which can be benchmarked, such as 'wastage rates' or 'hours since production line stoppage'. But what these two benchmark areas are able to clearly identify is things that are "good", and why they are better or worse than a lower performance. If material is being wasted, then purchase costs are higher than they need to be. If the production line stops, then capital goods are not being used and therefore profit falls.

But that same manufacturing plant might have an R&D department which makes prototype products. For the R&D department, it might have very high wastage rates, because it might make twenty different prototypes of a product, and then at the end come up with a product that can be made in one-quarter of the time of the first, thereby saving significantly on manufacturing costs.

For the R&D department, it makes no sense to benchmark against 'wastage rates' because it is not clear what is good. Obviously, it is better if the R&D department make fewer prototypes, but that has to be balanced against coming up with the need to try out several prototypes to eventually develop one that is more manufacturable. A better benchmark might be the minimising the number of designs which enter the prototype stage which never become final products – it is there that the issue of waste lies because staff time is wasted doing things – making prototypes – for designs which could have been rejected at the design stage.

Although benchmarking needs to be simple, it is important not to take a simplistic view of what the overarching aims are, and what can tell you that you are doing a better or worse job. For universities, these problems are magnified because universities are very complex systems. It is very difficult to unambiguously identify simple performance indicators what is good and bad in a way that applies to all universities. It is therefore necessary to begin from one step removed, and identify what counts as good behaviour. For the R&D department, good behaviour might be defined as the development of a pipeline of new products that create new sales and reduce manufacturing costs of existing products.

Defining what counts as good behaviour is an extremely useful exercise for a university undertaking a benchmarking process, because ultimately there are no simple answers to benchmarking. Universities have to take responsibilities for interpreting how data corresponds to performance in their own institutional situation. Defining what is good behaviour effectively is the foundation of any effective data gathering exercise.

AFTERWORD

HOW TO BUILD AN EVIDENTIAL FRAMEWORK

Benchmarking is part of performance management, and performance management seeks to improve performance by understanding it, both in terms of the level of current performance, and the scope for its improvement. In complex systems where there are no simple performance indicators – as is the case for universities – understanding performance means bringing together data from a range of sources and interpreting that to understand performance and potential. What indicators that there are have to be understood as proxies, that is to say they are suggestive of performance, they do not measure it perfectly.

This fact that the available data has to be understood as proxies for complex underlying processes means that it cannot be assumed that the data will tell a simple story. Data has to be interpreted, and different proxies may provide different performance indications. Effective interpretation therefore means resolving these differences. As a general rule, the more objectively and fairly different sources of data can be interpreted, the more their use for a benchmarking exercise.

In the collaborative benchmarking approach we set out in this *Handbook*, we resolve this issue of fairness and objectivity by proposing the use of expertise levels (following the practice in the PROBE methodology, *qv*). What we argue can address this issue of uncertainty is setting out a number of behavioural archetypes, in our case four, each qualitatively and unambiguously better than the lower levels. These four levels are defined starting from the definition of what good behaviour is by a university at that level. The interpretation becomes a process of deciding to which performance level an HEI best corresponds. The typical distinctions made between the levels are:

Excellent	the process is strategically managed in a way that is very tailored to the needs of the university, with strong feedback loops to continually challenge existing practice and ensure that it is always working towards delivering the strategic needs of the university.
Good	the process is strategically managed in a way that conforms with good practice, and clear benefits are derived, but there is less emphasis on continuous improvement and verifying performance against changing context and practices.

Satisfactory	the process is strategically managed in a rudimentary way in which shortcomings of the process or procedure are worked around through local ad hoc solutions which are not themselves reviewed or improved because they are seen as being 'outside' the management system.
Basic	strategic management of the process is largely or entirely absent, or there is a substantive gap between the strategy development processes and implementation, which mean that change occurs on an ad hoc and reactive basis, with limited input from strategic managers, and no relation to information-gathering or benchmarking exercises.

An example of this might be that the interest is in the involvement of external stakeholders in the strategic decision-making processes of the university. The best practice in this case can be determined (from HEM literature) to be that external stakeholders are structurally involved with university strategic decision-making in ways that are managed to ensure that the university optimise the benefit from the external stakeholders. From this, it is possible to construct four performance levels:

Excellent	external stakeholders are structurally involved with university strategic decision-making at all levels of the university in ways that are managed to ensure that the university optimise the benefit from the external stakeholders
Good	external stakeholders are structurally involved with strategic decision-making at all levels of the university, and external stakeholder input is effectively used in improving the quality of decision-making.
Satisfactory	external stakeholders are involved with university strategic decision-making, with a mix of ad hominem and ex officio appointments to committees on a needs basis, with clearly defined roles and opportunities to challenge and contribute within the decision-making process.
Basic	external stakeholders are involved with university strategic decision-making in an ad hoc manner, reflecting existing contacts and senior management preferences.

The use of levels does not remove the need for objectivity and fairness. It is a common mistake to over-grade one's own performance. The behavioural levels therefore set out the kinds of evidence which might indicate performance at a particular level. However, universities might have other kinds of evidence that they think is also helpful in deciding at which performance level the university is working. As long as the evidence is provided in a fair and reasonable way, there are no limits to introducing new kinds of data and evidence.

AFTERWORD

WHICH DATA TO GATHER

The use of levels provides a means to structure the data collection and analysis process. In this approach, what is being sought is evidence that an institution is performing at one level rather than another level. This means defining the kinds of data that might suggest that performance corresponds to a particular level. In manufacturing, a performance standard that is widely understood is '6 sigma', that is to say that error rates are outside six standard deviations from the norm, below 3.4 per million items, or effectively perfect. This issue is far less clear in higher education management, and this means that benchmarking is a constructive process, where processes are complex and highly contextually-dependent. The use of levels provides a means for identifying the kinds of data that might suggest that an HEI functions at one level rather than the other. The ideal kind of data is one which has the lowest possible context dependency, which can be achieved by using ratios or rates of change for variables. Qualitative and characteristic data (scoring according to a set of criteria) can also help to deal with issues of comparability.

The biggest transformation in an HE benchmarking exercise is the step from the definition of the levels in abstract terms, to operationalising those levels into the kinds of evidence which would be suggestive of performance at those levels. It is very difficult to come up with a generic set of rules for deciding what kinds of performance correspond to which levels. However, with a four expertise level division, the kinds of evidence that would correspond to the levels can be understood in the following ways.

Excellent	performance indicators in key areas are improving, there is strong evidence that the process is strategically managed through a quality procedure which is held under review and is continually improved over time. Key assets are also strategically managed to ensure that they support the particular process area, but are also made available where possible to improving the quality of other business processes. There is evidence of multi-use of key assets and of a high-quality debate within the institution about strategic development.
Good	performance indicators in key areas are improving, there is strong evidence that the process is strategically managed through a quality procedure, and that quality procedure can be shown to have improved the quality of the outputs; there may be special infrastructures or facilities that support the delivery of the process.

Satisfactory performance indicators in key areas are improving, there is limited or no evidence of attempts to strategically manage the process area.

Basic performance indicators in key areas are static or declining

An illustration is taken here from the university-enterprise cooperation group. In this group, there were three priorities, and these three priorities were further subdivided into nine targets. This is shown in the table below.

Priority	Target
Priority One) Definition of joint strategies for partnership with regional actors	Increase institutional partnerships in: 1. Research and Development activities 2. Continuing Education (including professional development) 3. Joint development of regional infrastructures (spin-offs, business incubators, science parks; public-private partnerships)
Priority Two) Active promotion and engagement in knowledge exchange as support mechanism to improve students' employability	Increasing the development of the following: 1. Jointly executed practice-based learning projects between students, teachers, enterprises (thesis, projects, etc...) 2. Staff exchange between each University and Enterprises (secondments; professional doctorates, workplace integrated doctorates) 3. Permanent dialogue between University and Enterprises (think tanks, fora, networks)
Priority Three) Improved data collection	Improve the definition and the collection of relevant indicators to measure University- Enterprise cooperation: 1. At the institutional/internal level 2. On the external environment (which will allow each institution to profile itself strategically and better respond based on its strengths; this will also support decision making at the level of priority 1) 3. On the impact of its institution on its region

For each of these priorities and targets, a set of indicators were defined, and then for each of the targets, a set of indicators were defined, the indicators being pieces of evidence which would suggest whether the minimum criteria for the performance level were being met. This is illustrated with an example of how priority 2, target 1 was operationalised.

“Priority 2, Target 1: Knowledge exchange for students employability - Joint projects”

Excellent	the university has embedded student projects with business as part of their wider enterprise engagement activities, with student project-work able to use the wider assets created to support commercial engagement, and helping to build up longer-term relationships with companies that become pathways for more substantive knowledge exchange relationships.
Good	the university has a functioning framework in place by which staff, students and firms are encourage to jointly developed useful and interesting project proposals which help to underpin university-enterprise knowledge exchange, with sufficient flexibility to allow useful knowledge transfer as well as pedagogical accreditation.
Satisfactory	the university has a functioning framework in place which supports or requires enterprise engagement or student placements as part of the degree course. This framework is active across departments/ faculties, with more than one-third of faculties and one-third of students making use of the rules to undertake enterprise-based learning.
Basic	the university has structures in place for the accreditation of enterprise-based problem solving as part of degree courses, and there are regular connections and contacts between universities and the firms, although these are not managed strategically or in use across the university.

The example above makes the point that the lowest performance level is not necessarily a zero performance. It is the very basic performance, where activities are undertaken on an ad hoc level without being managed to ensure that they deliver towards university strategic goals and the quality of which cannot be guaranteed. In the above example, a university may have more than one-third of its students doing placements, and one-third of its faculties may have requirements for students to undertake practical assignments.

HOW MUCH DATA TO GATHER

We have made a strong case for not assuming that data is objective or is suitable to tell the whole story of institutional performance. Data is at best a proxy or set of proxies for underlying institutional performance. This means that more is not necessarily better, so more indicators does not necessarily give a more precise picture of performance.

Certainly, adding better indicators will give a better picture, but adding more indicators, particular indicators that are more removed from the core processes, actually reduces the level of certainty about performance. It also creates confusion by giving a sense of false precision, undermining the extent to which the benchmarking process is in reality an expert judgement, and giving an aura that it has been externally validated.

In benchmarking terms, the 80/20 rule applies. That is to say that you can achieve 80% of the understanding with 20% of the effort, and then after that point, there are diminishing returns to additional effort of gathering the data. This has two implications. Firstly is that users should be prepared to be quite selective in their choice of indicators, that give a breadth of activity coverage. Secondly, the responsibility for the interpretation of the data lies with the users and it is as much the judgement of the users in interpreting the data as in the quality and precision of the indicators that give value to a benchmarking exercise.

This is clearly counterintuitive: one of the attractions of a benchmarking exercise is its objectivity and impartiality, to get some objective referencing and verification of institutional performance that can be used as a solid foundation for institutional strategic development. It is necessary to be clear from the start that a benchmarking exercise does not “prove” anything: what it does is give a set of signals which senior managers can use to take decisions in an extremely confusing environment which are better informed, and therefore more rational, than if they were reliant entirely on internal or personal information sources.

This should not be taken to read that qualitative data is better than quantitative data. It is clear that there is a risk of complacency with qualitative data. Where institutions rank themselves against qualitative performance levels, they often over-report their performance, and assume that what they are

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doing complies with what is described in the higher levels. This apparently arises out of an institutional unwillingness to report negative characteristics or perceived underperformance, whilst effective benchmarking clearly cannot operate without a recognition of institution weaknesses.

This problem needs to be addressed by institutions creating mechanisms to challenge the scores they give themselves outside the main project and senior management team, ensuring that scores are reviewed by people that have both a perspective on the university as an institution relevant to the processes being benchmarked, but a degree of independence from university senior managers. This can be achieved by gathering a selection of staff members (or even external stakeholders) to comment and debate the scores given (even those scores derived from quantitative data). The HEFCE (2002) regional engagement benchmarking methodology proposed that universities would score themselves, and then 'defend' those scores to a panel comprising regional stakeholders.

ANNEX 2: GLOSSARY OF BENCHMARKING

The complexity of the business of benchmarking means that it has acquired a language of its own which cannot always be easy to understand. In order to clarify the meaning of what appears in this *Handbook*, the glossary provides an overview of the definitions used relating to the benchmarking process as applied in the Second Phase of the Benchmarking in European Higher Education project. They primarily stem from existing sources, or were defined during the benchmarking as part of the overall methodology. They form a key set of working definitions crucial to carry out collaborative benchmarking among universities in Europe.

The structure for this appendix is to firstly provide a set of definitions relating to defining standards, benchmarks and best practice and distinguishing different kinds of benchmarking. The glossary is then structured according to the stages of the benchmarking process at which particular terms arise. Typically the first step in a benchmarking exercise is in setting priorities, followed by developing indicators and then finally the action plan. The five sections in this glossary are:

1. Defining standards, benchmarks and best practice
2. Benchmarking
3. Priority setting
4. Indicators
5. Action Plan

STANDARDS, BENCHMARKS, BEST PRACTICE

STANDARDS

Statements regarding an expected level of requirements and conditions against which quality is assessed or that must be attained by higher education institutions and their programmes in order for them to be accredited or certified. The term standard means both a fixed criteria (against which an outcome can be matched and a level of attainment). Standards may take a quantitative form, being mostly the result of benchmarking, or they may be qualitative, indicating only specific targets. More often than not “Basic standards” are defined at the level of minimally acceptable quality. On other occasions, the standards refer to the highest level of quality, thus being considered as “standards of excellence”. These may result from a benchmarking

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exercise or be asserted implicitly, being so recognised by the peers in a collegiate way. Standards may have different reference points: (i) inputs (e.g. content standards) (ii) outputs (e.g. performance standards), (iii) processes. (CEPES, glossary)

BENCHMARK

A standard, a reference point, or a criterion against which the quality of something can be measured, judged and evaluated and against which outcomes of a specified activity can be measured: The term benchmark, means a measure of best practice performance. (CEPES, Glossary)

BEST PRACTICE

A method or an innovative process involving a range of safe and reasonable practices resulting in the improved performance of a higher education institution or programme, usually recognised as “best in breed” by other peer organisations. A best practice does not necessarily represent an absolute, ultimate example or pattern rather, it identifies the best approach to a specific situation, as institutions and programmes vary greatly in constituencies and scope. (CEPES, glossary)

BENCHMARKING

→ A process inside an organisation with the aim to improve its performance by learning about good practices for primary and/or support processes by looking at those processes in other, better-performing organizations, building on evaluation of relevant performances (if possible through measurement of Key Performance Indicators) in own and others' organisations. Several benchmarking forms which are not mutually exclusive can be distinguished: collaborative benchmarking, competitive benchmarking, internal/external benchmarking, functional benchmarking, trans-institutional benchmarking, trans-national benchmarking, implicit/explicit benchmarking. Also there is a shared understanding of true benchmarking processes. A true benchmarking process is improvement-oriented. Indispensable elements of true benchmarking are: clear and explicit goals, negotiation, collaboration, dialogue and the development of a mutual understanding. (*The Practical Guide*)

PERFORMANCE DRIVEN BENCHMARKING

The performance driven benchmarking approach looks at university outputs/ performance and strategies and procedures in place to achieve these outputs based on performance indicators. The aim of the performance driven benchmarking approach is to compare outputs between different (competing /better performing) universities.

It is sometimes difficult to engage universities in this competitive-type benchmarking as often indicators are not available, especially not if one wants detailed information about processes within organisations showing how performances are reached.

PROCESS DRIVEN BENCHMARKING

The process driven benchmarking approach looks at university processes and best cases based on performance indicators. The aim of the process driven benchmarking approach is internal (institutional) learning by comparing to and learning from other/better performing universities. (Project Phase 2, Van Vught et al., 2010).

ONE-TO- ONE BENCHMARKING

At its simplest; one-to-one benchmarking can be initiated through active institutional and desk research within the institution looking at public data available on one or several other institutions as a collaborative exercise to produce reports for improvement. In one-to-one non collaborative approaches, both higher education institutions enter their data in a database which already contains data from other higher education institutions, or those external data are contributed by the professional association consulting company which coordinates the benchmarking exercise. Once the data have been entered, higher education institutions receive a report of their scores and information on where they are positioned against the competition.

COLLABORATIVE BENCHMARKING

Benchmarking that involves comparisons of processes, practices and performances with similar institutions of a larger group of institutions in the same field that are not immediate competitors.(CEPES, glossary)

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PRIORITIES AND TARGET SETTING

GOAL

The higher-order objective to which a development intervention is intended to contribute. The set of outcomes which if achieved after the event will satisfy our prior demands for change. (OECD)

PRIORITY

Priority is the domain on which strategic interventions will be focused in order to secure the organisational goals. In the context of a benchmarking exercise, they are the relevant area in which benchmarking takes place; e.g. the learning experience, research performance, administration, staff development. (Project Phase 2, Christiane Gaehtgens, 2010).

TARGETS

For the purposes of the project, we are defining targets as a specific objective within a priority area: this provides a useful working definition in this context. Targets should be quantifiable; e.g. measured against indicators and assessed against benchmarks. Targets can be short term or long term. A set of concrete outputs which can be directly worked towards, and which if realised will provide confidence that the final goals will be achieved. In a benchmarking exercise, the targets are the outcomes that have to be secured which together will deliver the overall priority (working definition)

TARGET SETTING

Target setting in the benchmarking process aims at improvement in priority areas. The priority areas have been mutually agreed upon by Higher Education Institutions within each benchmarking group. Targets are defined at institutional level involving key stakeholders and senior management. (working definition)

This can be illustrated with an example from the Lifelong Learning – CPD group, who narrowed their broad interest into 6 clearly defined targets, related to three higher level priorities, which in turn fed into the operational goal, which was improving lifelong learning through a focus on continuing professional development (CPD).

Starting point for the group: to optimise the contribution of the university to the delivery of national policy-maker priorities in the domain of lifelong learning in as sustainable and effective way as possible for the institution.
 Goal: to learn about effective lifelong learning activity by optimising the provision of CPD courses.

Priority 1: Improve Access and Transition to CPD by potential clients	
Target 1	Definition of CPD target groups per programme type
Target 2	Implementation /review of functioning recruitment strategy
Priority 2: Better understand the Institutional Context:	
Target 1	Identify the approach to CPD in the HEI (strategic, operative or tactical)
Target 2	Assessment of importance of CPD within HEI
Priority 3: Improve collaboration with Enterprises/Organisations:	
Target 1	Improvement of stakeholder involvement
Target 2	Fostering education-driven innovation

INDICATORS

→ Operational variables referring to specific empirically measurable characteristics of higher education institutions or programmes on which evidence can be collected that allows for a determination of whether or not standards are being met. Indicators identify performance trends and signal areas in need of action and enable comparison of actual performance with established objectives. (CEPES, glossary)

PERFORMANCE INDICATORS

A performance indicator or key performance indicator (KPI) is a measure of performance. Such measures are commonly used to help an organization define and evaluate how successful it is, typically in terms of making progress towards its long-term organizational goals. (Wikipedia)

Performance indicators are defined as measures which give information and statistics context; permitting comparisons between fields, over time and with commonly accepted standards. They provide information about the degree to which teaching and learning quality objectives are being met within

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the higher education sector and institutions. There are 4 main types of performance indicators generally agreed upon: Input, Process, Output and Outcome. These can be more broadly categorised as quantitative and qualitative indicators. (IMHE)

A range of statistical parameters representing a measure of the extent to which a higher education institution or a programme is performing in a certain quality dimension. They are short-term or long-term qualitative and quantitative measures of the output of a system or programme: They allow institutions to benchmark their own performance or allow comparison among higher education institutions (Glossary, CEPES)

KEY PERFORMANCE INDICATORS (KPI)

In businesses, Key Performance Indicators are quantifiable measurements, agreed to beforehand, that reflect the critical success factors of an organization. They must reflect the organization's goals, they must be key to its success, and they must be quantifiable (measurable). Key Performance Indicators usually are long-term considerations.

(<http://management.about.com/cs/generalmanagement/a/keyperfindic.htm>)

In Higher Education alternatives to KPI, which define a private business's success, alternative KPIs to 'profit' have been developed. For instance, research and innovation performance can be indicated by number of publications, citation scores, number of patents, contract income, numbers of spin-offs, etc. (Project Phase 1)

DESCRIPTIVE INDICATORS (as opposed to performance indicators)

A good distinction is made here by the "U-Map" project [A classification of university higher education institutions project](#).

"The classification should reflect the actual profile of an institution. It should offer a description of the actual situation of an institution on the dimensions and indicators judged to be relevant by stakeholders, including the institution itself. It should not judge or evaluate institutions on the basis of this information or on the institution's position on any of the dimensions and indicators." (Van Vught et al., 2010)

QUANTITATIVE INDICATORS

Quantitative indicators are defined as those associated with the measurement of quantity or amount, and are expressed as numerical values; something to which meaning or value is given by assigning it a number. These include input and output performance indicators. (IMHE)

- A quantitative data gathering exercise will use indicators and hard data to set future targets and benchmarks for improvement. (Project Phase 1).

QUALITATIVE INDICATORS

Qualitative indicators are associated with observation based descriptions, rather than an exact numerical measurement or value. They relate to or involve comparisons based on qualities or non-numerical data such as the policies and processes for assessing student learning, the experience of a learning community, or the content of a mission statement.

Outcome and process indicators lie within the classification of qualitative measures. These performance indicators typically do not involve generating the quantity of outcomes in the form of numerical data, but measure complex processes and results in terms of their quality and impact. (IMHE)

- A qualitative data gathering exercise will use observation based descriptions to identify underlying processes to set future targets and areas for improvement.

Indicators should be quantitative as well as qualitative, as most issues are best understood and compared through using a mix of quantitative and qualitative methods (Project Phase 1)

INPUT INDICATORS

Input indicators reflect the human, financial and physical resources involved in supporting institutional programmes, activities and services. Limitations concerning input indicators surround their inability to determine the quality of teaching and learning without extensive interpretation. For example, an indicator such as resource allocation should be interpreted with enrolment data (to determine resource to student ratio), resource quality (i.e. condition) and conceptual range (e.g. library book topics) to determine teaching and learning quality. (IMHE)

PROCESS INDICATORS

Process indicators are those which include the means used to deliver educational programmes, activities and services within the institutional environment (Burke, 1998). These measurements look at how the system operates within its particular context, accounting for institutional diversity, a common confounding factor in inter- and intra-institutional comparison. (IMHE)

OUTPUT INDICATORS

Output data reflects the quantity of outcomes produced, including immediate measurable results, and direct consequences of activities implemented to produce such results (Burke, 1998). The defining feature is quantity or numerical amount, and the quality of these numbers is almost entirely disregarded. Input and output measures are inherently constrained by their data-driven “quantitative” nature, which prohibits the investigation of instructional, interactive and learning processes crucial to the quality of an institution, its educational programmes and its graduates. As such, quantitative performance indicators do not demonstrate quality of education, but rather quantities of its outcomes (Burke et al, 2002).

OUTCOME INDICATORS

Outcome measures focus on the quality of educational program, activity and service benefits for all stakeholders. These key stakeholders include students, parents, the community, employers and industry (Burke, 1998; Warglien and Savoia, 2001). Outcome performance indicators typically do not involve generating the quantity of outcomes in the form of numerical data (as do output performance indicators), but instead measure complex processes and results in terms of their quality and impact. This is the difference between output and outcome measures. While they both measure the effects of higher education, output performance indicators measure this quantitatively, and outcome measures do this qualitatively. (IMHE)

ACTION PLAN

An action plan is an institutional strategy to implement change through a set of activities with the aim to achieve better quality/ performance in specified areas. An action plan provides a systematic explanation of how a project will be delivered, rooted in decisions informed by evidence to avoid partial or prejudiced decisions.

There are typically four main phases in an action plan, setting goals, developing a business plan, implementing the business plan and evaluating performance and outcomes.

- **Setting goals:** At the start of the process there will be a sense of where the institution strategic priority for improvement is, underlain by both an explanation of how they know it is weak, and what potential avenues there are for improvement. Next remedies must be identified to address the weakness and improve institutional performance.
- **Business planning:** The next step is – again on the basis of evidence and judgement – to arrive at a decision of which of the remedies should be done first as a pilot scheme, on the grounds both that it has a good chance to be successful, but also that it will help to build the basis for other, wider changes within the university. A project is constructed to meet a clear goal set specified in step 1, and evidence assembled to allow (i) an understanding of the prior situation (ii) an understanding of the post situation.
- **Implementation:** The project is undertaken, and monitored against the delivery of targets and milestones, with plans being adjusted if evidence suggests it is necessary. As a strategic change, communications with internal and external stakeholders are important at this stage.
- **Project evaluation:** prior and post evidence is assembled to evaluate the success of the project, and to generate lessons along the lines that either performance has improved, or that the problems are deeper than anticipated at the start.

The process is then repeated with an institutional benchmarking exercise that seeks to understand how the university is performing in comparison to its prior performance.

MILESTONES

Milestones are important intermediate measurable results or outcomes of the project or task set out in the action plan. Setting milestones helps to structure the implementation of an action plan by breaking down the tasks into smaller more manageable pieces. Milestones are usually related to deliverables and deadlines. This includes defining a number of milestones that can be achieved within the project lifecycle and others that are long term.

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RESOURCES

Resources are the entire financial (e.g. budget, funds), human (e.g. staff, support, external expertise), technical (e.g. infrastructure) resources needed to carry out the action.

OUTPUTS

The immediate direct and more quantifiable product or result of a process or action.

OUTCOMES

A level of performance or achievement

STAKEHOLDERS

A person, group or organisation directly and indirectly interested in the action (internal and external stakeholders)

ANNEX 3: LIST OF PARTICIPATING UNIVERSITIES

The pilot project involved inputs from the following universities drawn from 16 European countries. Some universities participated in more than one group. In this annex, we set out which universities were involved with which group. Not all universities were completely active through the life of the project; a number of institutions underwent changes in management and strategic direction through the life of the project which meant they were temporarily unable to participate in one or more of the workshops.

Governance

1. Brno University of Technology (CZ)
2. Central European University (HU)
3. Freie Universität (FU) Berlin (DE)
4. Hochschule Bremerhaven, University of Applied Sciences (DE)
5. Hogeschool van Amsterdam, University of Applied Sciences (NL)
6. Mykolas Romeris University (LT)
7. Romanian University of Science and Arts "Gh. Cristea" (RO)
8. Universidad Carlos III de Madrid (ES)
9. University of Graz (AT)
10. University of Helsinki (FI)
11. University of Latvia (LV)
12. University of Limerick (IE)
13. University of Salford (UK)
14. University of Sheffield (UK)
15. Vilnius University (LT)

Lifelong learning (LLL-CPD)

1. Universidad Miguel Hernández de Elche (ES)
2. University of the West of England (UK)
3. University of Primorska (SI)
4. Copenhagen Business School (DK)
5. University of Porto (PT)
6. University of Oviedo (PT)

University-Enterprise Cooperation (UEC)

1. Universidad Miguel Hernández de Elche (ES)
2. Galway-Mayo Institute of Technology (IE)
3. University of Aveiro (PT)
4. Aarhus University, Aarhus School of Engineering (DK)
5. University of Porto, Faculty of Engineering (PT)
6. University of the West of England (UK)
7. Anglia Ruskin University (UK)
8. University of Tartu (EE)
9. Jagiellonian University (PL)
10. Tampere University of Applied Sciences (FI)

Curriculum Reform (CR)

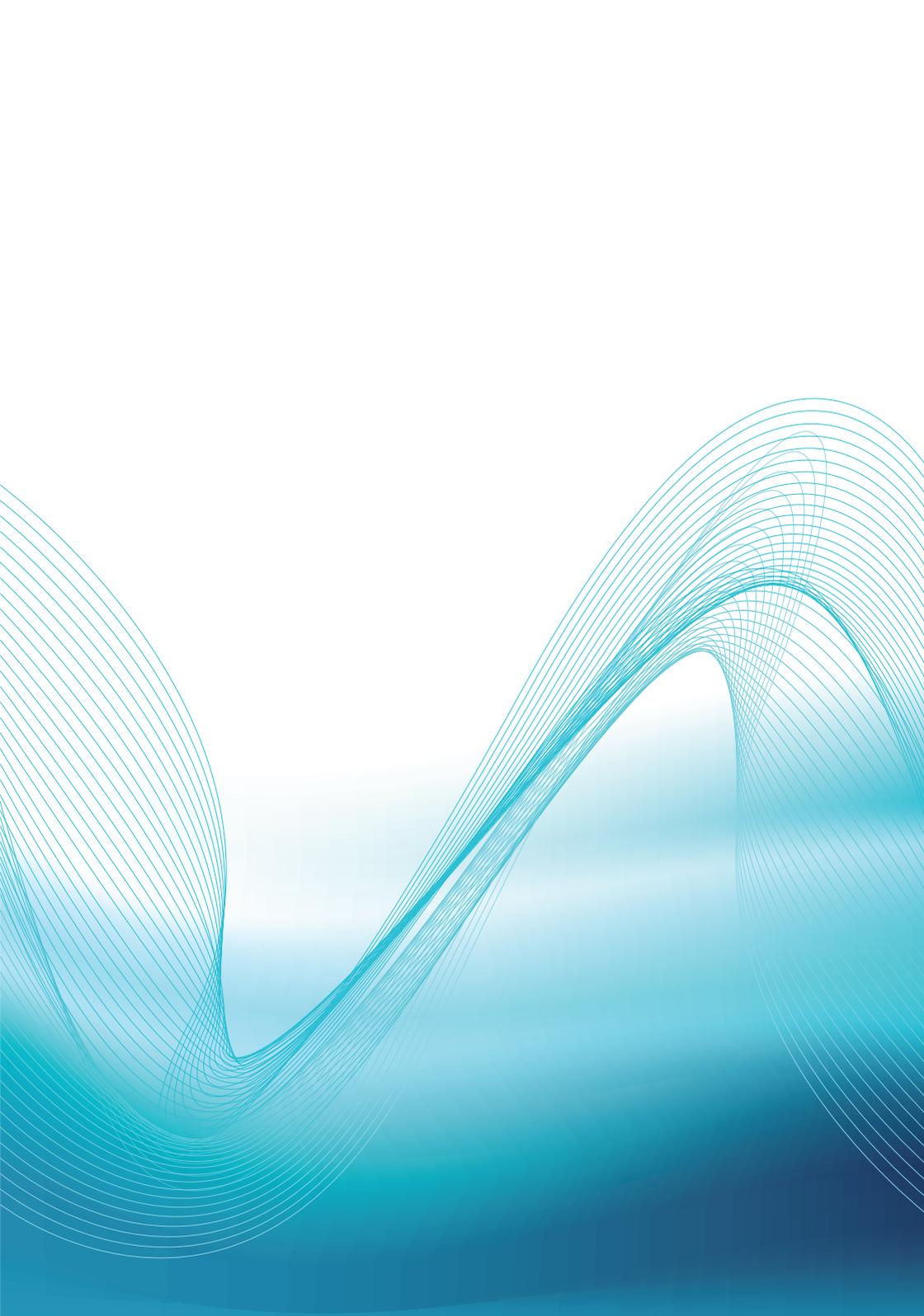
1. Free University of Berlin (DE)
2. University Duisburg-Essen (DE)
3. Masaryk University (CZ)
4. Brno University of Technology (CZ)
5. University of Jaen (ES)
6. University of Tartu (EE)
7. Galway-Mayo Institute of Technology (IE)
8. University of Primorska (SI)
9. University of Oulu (FI)
10. Tampere University of Applied Science (FI) – formerly University of Applied Science, Pirkanmaa
11. Central European University (HU)

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ANNEX 5: LIST OF ABBREVIATIONS

CPD	Continuing Professional Development
CR	Curriculum Reform (benchmarking group)
ESMU	European Centre for the Strategic Management of Universities
EU	European Union
GDP	Gross Domestic Product (standard measure of national wealth)
GOV	Governance Group (benchmarking group)
HEI	Higher Education Institution (university or college)
LLL	Lifelong learning
LLL-CPD	Lifelong Learning-Continuing Professional Development (benchmarking group)
R&D	Research and Development
UEC	University Enterprise Cooperation (benchmarking group)





This handbook is the product of a two-year project, *Benchmarking in European Higher Education*. This project has been funded with support from the European Commission.

With a straightforward hands on approach, this handbook aims to be a tool for higher education institutions to enhance their use of benchmarking, in order to improve their overall performance and to profile themselves much more strategically in increasingly competitive environments.



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