CLASS OF 2030

WHICH UNIVERSITIES WILL RISE - AND HOW WILL THEY DO IT?

SUMMARY

It can feel like little ever changes in Higher Education: The top universities are always the same.

Over timeframes that matter, we disagree. Several universities founded in the last 50 years are now among the best in the world.

Over the next 10-20 years, there will be unexpected challenges to the establishment. Ambitious, fast-improving universities will take advantage of disruptive global trends that create unique opportunities for innovation.

Our research suggests the difference between the winners and losers will be strategy. No-one will become world class by chance.

The rising "Class of 2030" will balance long-term vision with short-term execution, linked together by strong management and culture.

They will have a clear view of the changing world and their role in it, and a robust plan to get the resources, people and culture they need to be successful. They will innovate, harnessing new partnerships, new networks, new resources and new institutional models.

The outward-looking and impact-focussed institutions will beat the inward-looking and complacent.

There is no one-size-fits-all answer. Instead, each of the "Class of 2030" will define success on their own terms. The next regional and global leaders could, and probably will, come from all four corners of the world.

Our research suggests ambitious universities will pursue a clear direction in five areas: Differentiated Excellence; Local, Social & Global relevance; Integrated Planning, People & Culture; and Academic Entrepreneurship, while extending the research quality that is core to differentiating universities from other institutions.

To illustrate how these universities are tackling these questions, we have developed a checklist for each of these five areas.

DESIGN, ARTS AND MEDIA SCHOOL. NANYANG TECHNOLOGICAL UNIVERSITY, SINGAPORE

INTRODUCTION

It can often feel like little ever changes in the Higher Education sector. The top universities are always the same and perceptions of institutions change slowly, remaining more or less stable over time.
At Firetail, we take a different view. We believe that a new generation of challenger universities have a unique opportunity to become globally-renowned institutions over the next 10 to 20 years.

Example Young Champions

Source: Times Higher Education survey, URAP, university websites

Universities founded in the last 50 years have already become regional and global leaders. More than a dozen "Young Champion" universities are in the global top 250. For example, the Pierre and Marie Curie University in Paris, established in 1971, ranks 26th globally by the major global ranking index, URAP (see "Ranking the Rankers" text box, p7). Seoul National University, only slightly older, ranks 36th.

Inspired by the achievements of these Young Champion universities, we set out to see what current mid-ranking institutions were up to. We found many rising an average of 100 places in the rankings every 3 years. Their progress is consistent and deliberate.

Those who sustain this improvement over the next 15 years -and let's be clear, not all of them will- are set to become globally influential universities during the 2030s. They can and will shake up the establishment. We call them "The Class of 2030". The question remains of who will graduate this class and who will drop out.

This note sets out the findings of our recent research. We map the trends creating opportunities for change, then set out one way of identifying the fast improving universities that might seek to capitalise on them. Our main focus is to illustrate how the university leaders we spoke to are approaching the fundamental questions underlying how to sustain success over multiple decades. In our appendix, we close by highlighting select reports from the wider literature on world-class universities.

THE INCREDIBLE AMBITIONS OF THE MIDDLE CLASS

Our first question was whether the mid-ranking universities revealed by our analysis harboured the ambitions implied by it. We needn't have worried.

Speaking to the leaders of these rising universities, it is clear that improving in the global rankings is just one way they are signalling their ambition to the world. They too have spotted the progress and strategies of Young Champion universities and plan to chart an equally impressive path.

How many universities can say they have negotiated with their government to increase the landmass of an autonomous region by 3% - just to house their ambitions to expand the faculty? Macau University in one of China's Special Administrative Regions can. They have also risen 607 places in the URAP global rankings since 2010.

Interviewees in this study frequently cited global rankings as the best way to indicate their intention to become serious global or regional players. Alongside this, they were also pursuing transformative initiatives – with a fascinating blend of traditional goals and eye-catching, innovative targets.

CLASS OF 2030: OUR APPROACH

- Analysed six years of research citation rankings for the top 2,000 universities, alongside key organisational and country features, to identify fast improving universities
- Interviewed a selection of senior leaders from 16 such fast improving universities in 12 different countries, typically rectors, vice chancellors, directors and presidents
- Reviewed strategic planning documents, annual reports, leadership statements and prospectuses across 25 fast improving institutions
- Conducted a literature review of policy approaches to fostering world class universities, supported by our personal project experience of Higher Education projects across three continents

Traditional goals included doubling student enrolment, doubling research expenditure in particular faculties, or driving through a 400% increase in the university's endowment. More innovative goals spanned teaching (90% of PhDs studying abroad for 6+ months), operations (entirely paperless by 2017), philosophy (a measurable mindset change in students) and infrastructure (to build the country's first particle accelerator or the University of Cyprus' objective to be powered solely by solar energy).

These were no empty words. These were serious ambitions typically matched by new leadership, new resources and a clear strategy for change.

1. DISRUPTIVE TRENDS CREATE THE SPACE FOR CHANGE

Surveys of global Chief Executives* highlight five interconnected themes transforming the global economy. These are Globalisation, Government Intervention, Resource Management, Emerging Market Growth and Productivity and Talent Management. Higher education will be buffeted by all of them, but the winners will not just survive these trends, they will thrive on them – exploiting the spaces they create in the market that other institutions miss.

GLOBALISATION

Increasingly footloose flows of research funding, students and academic talent lead to one conclusion: Stand-out success will be increasingly concentrated in fewer and fewer universities. Universities that aspire to be world-class will be global in outlook. They will not only build globalisation trends into their plans, but will build their plans around global opportunities. The percentage of people studying overseas has doubled in 15 years – that is the kind of opportunity that opens the door to entirely unexpected institutions with new business models.

Gross outbound enrolment ratio (%)

Total number of students from a given country studying aborad, expressed as a percentage of the population of tertiary age in that country

Source: UNESCO, June 2015

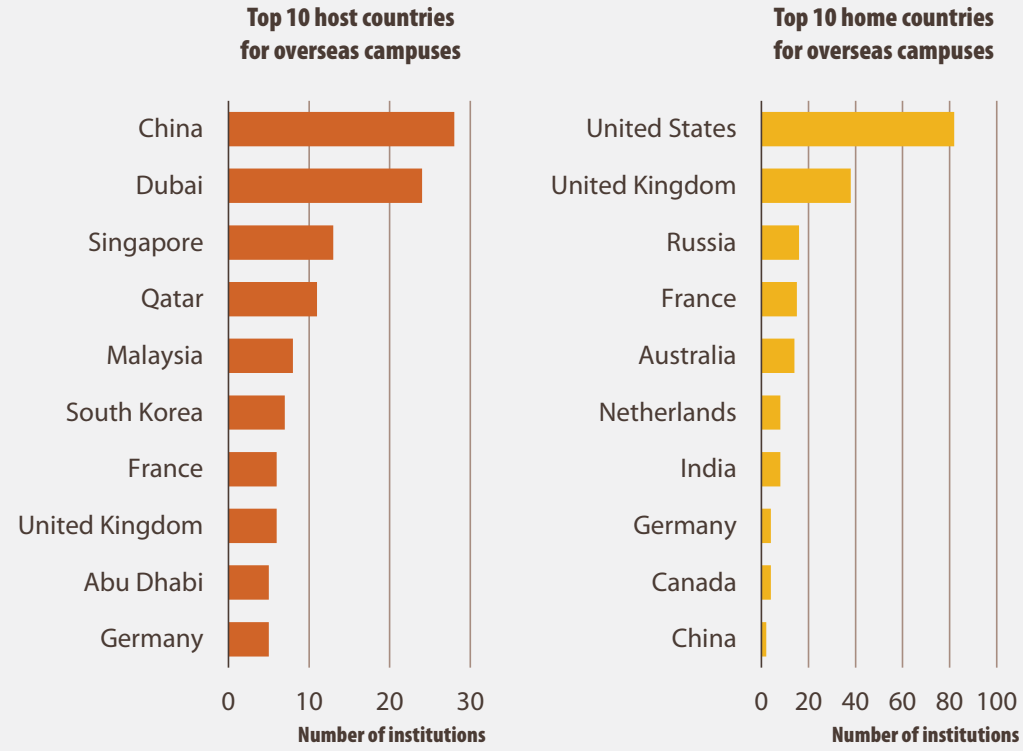
THE ROLE OF GOVERNMENTS

Government policy is a major factor in the strength of a national HE ecosystem. This creates opportunities for universities to demonstrate their potential to help governments achieve their goals. Universities should argue for a strong, innovative, well-funded sector, but should be comfortable proving and quantifying their impact more than ever - whether it is in the marketplace or in their requests for state support.

RESOURCE MANAGEMENT

Budgets are tight. Not just in a post-crash sense, but in a global capacity sense. Organisations with an eye on the future will need to manage budgets more effectively and be creative about where new resources come from. Choosing what to stop doing will be as important as choosing where to invest. In the longer-term, the availability of commodities and necessities like water may yet become a key strategic constraint on expansion. As companies and governments become increasingly aware of the need to act on resource management, universities have a key role to play in tackling the problems facing society.

* McKinsey Global Survey (2010) Five forces reshaping the global economy



Source: Cross-Border Education Research Team, October 2015

GROWTH IN EMERGING MARKETS

Increasing demand, a new middle class and the centrality of Higher Education to national growth and innovation strategies has seen massive investment in Higher Education in countries like China. It has also resulted in a gold rush of established universities setting up new overseas campuses. Overseas campuses open for various reasons, from prestige to the pursuit of tax breaks. Those that thrive typically have many international students enrolled at their home campus and have a broad internationalisation strategy.

PRODUCTIVITY AND TALENT MANAGEMENT

Recent years have seen online technology take its first faltering steps in transforming Higher Education. The low-cost Massively Open Online Courses (MOOCs) have landed most of the publicity (and criticism), but online technology will assuredly disrupt the sector. There will be innovative joint degree offerings, online accreditation, new forms of collaboration across institutions, pricing, and course design. Brands will become ever more important, challenging those with generic or undifferentiated offerings.

THE RISKS OF COMPLACENCY

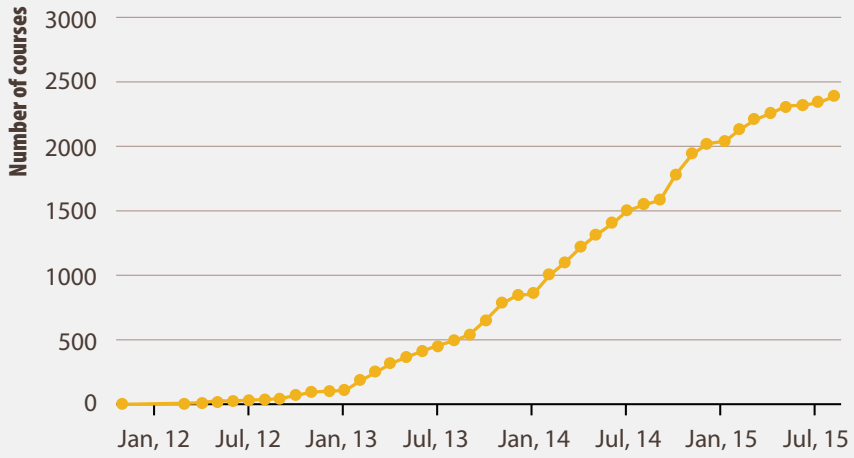
Disruptive trends are exactly that. No-one should expect a smooth journey.

Like all gold rushes, there are winners and losers. Overseas campuses are not all success stories. According to the researchers at C-BERT, at least 27 international campuses have failed and closed down. Many have low student numbers. MOOCs are in the "trough of disillusionment" phase of the hype cycle. Completion rates are low and more critics than champions have emerged.

This is normal. Exciting new ideas are often over-hyped and not every investment will pay off. MOOCs will have a place in the system, it's just not clear what that place is yet.

We would be naïve to dismiss the larger trends, just because individual manifestations might stutter along the way. Someone, somewhere will find the ways to innovate and capitalise on them.

Cumulative MOOCs scheduled or started

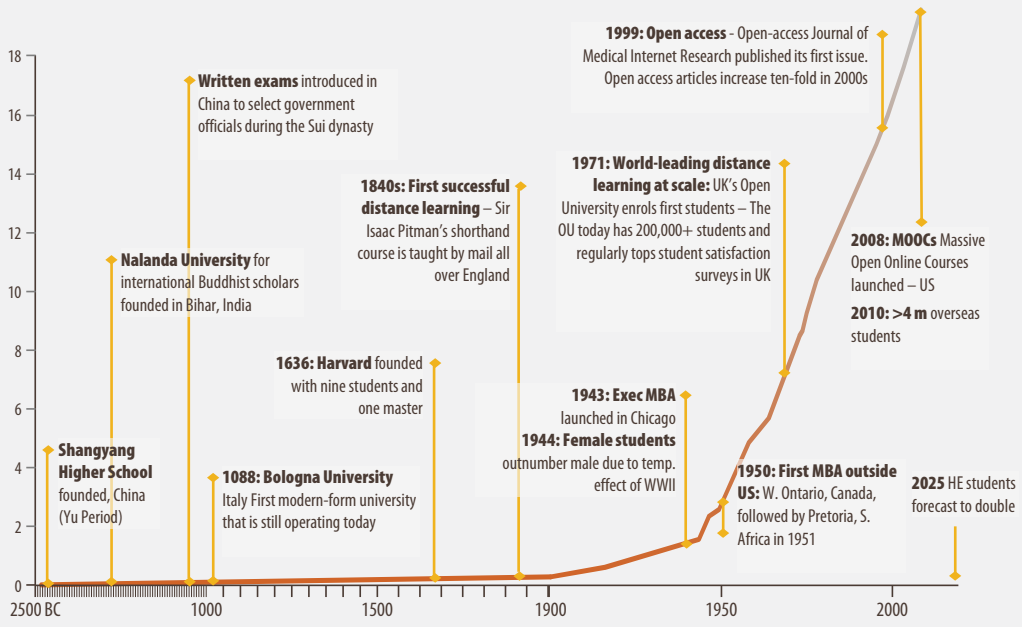


Source: Course Central, July 2015

Underpinning all of these trends is the astonishing increase in global participation in Higher Education.

The chart below points to student numbers doubling by 2025. More students creates more opportunities to turn challenges into innovations and turn innovations into financial and academic success stories. More opportunities, in short, for universities to transform.

Estimated university students per 1000 capita - World



Source for data: Schofer and Meyer (2005), United Nations (UNDESA, 1999)

2. WHO WILL GRADUATE INTO THE CLASS OF 2030?

One of the exciting developments over the next decades will be to see which universities emerge to be the next generation of global and regional leaders.

We examined one possible set of challenger universities: we screened those currently ranked 500th-1500th by research quality who have also improved consistently since 2010/11. Despite noise in the data, universities that improve in one year tend to continue improving. Over the last five years, about 80% of all changes in rank were in the same direction.

Universities rarely succeed on their own, so we also consider the country the university is in as part of our assessment. We built a national index of three equally weighted variables across 2008-2013:

- Is there global demand? We considered the number of foreign students as a proportion of local students, as an indicator of global demand for a country's Higher Education.
- Is it a knowledge economy? How much of GDP is spent on R&D? This shows the extent to which a country's economy is grounded in research and innovation.
- Is it a big market? We used total enrolment rates to capture the scale of HE in a country.

Institutions with a proven track record, having risen over 250 positions since 2010/11 with a broadly consistent pattern of year-on-year improvement, are a great place to start. Where these institutions also operate in a strong Higher Education environment, such as the US, South Korea or Switzerland, we describe them as "Rising Stars" – and find 20 in this category. A further 15 operate in weaker systems, such as Indonesia, Morocco or Mexico; we describe them as "Upstream Fighters". They have strong potential, but their domestic environment may present them with different structural challenges.

RANKING THE RANKERS

- While there is no shortage of ranking metrics for universities, many are sceptical about their necessarily reductive approach to measuring complex institutions, as well as known biases in citation metrics.
- The most influential rankings (QS and THE) use multi-component indices, including several citation metrics, teacher/student ratios, internationalisation measures and reputational data from surveys.
- Multiple other metrics exist, such as web presence (Webometrics' Top 12,000), career outcomes (The LinkedIn University Rankings or the UK's salary-based metrics), and the inevitable ad hoc rankings of nightlife and student sexiness.
- The primary focus of this paper is multi-year research performance through the middle tier of universities worldwide meaning we need to cover at least 2,000 universities – pointing us squarely towards the URAP rankings from the Middle East Technical University, where we focus on total citations.
- This approach naturally favours larger institutions and citations-heavy fields, such as medicine. While scale is helpful for fuelling a positive feedback cycle of reputation and impact, we would like to extend our approach, with, for instance, a metric for "quality concentration" (e.g. the CWTS Leiden metric of proportion of publications in the top 10% by citation) and faculty-, funding-, field- and year- normalised citation metrics. Such measures could give greater insight into spend efficiency and the potential for universities to continue improving rapidly.

For instance, the Saitama Medical Institute in Japan operates in a national culture with high levels of funding, high participation rates, excellent overseas reputations for foreign students and many opportunities for world-class partnerships. At the same time, such strong national markets are highly competitive. They must find ways to innovate and differentiate to stand out and improve.

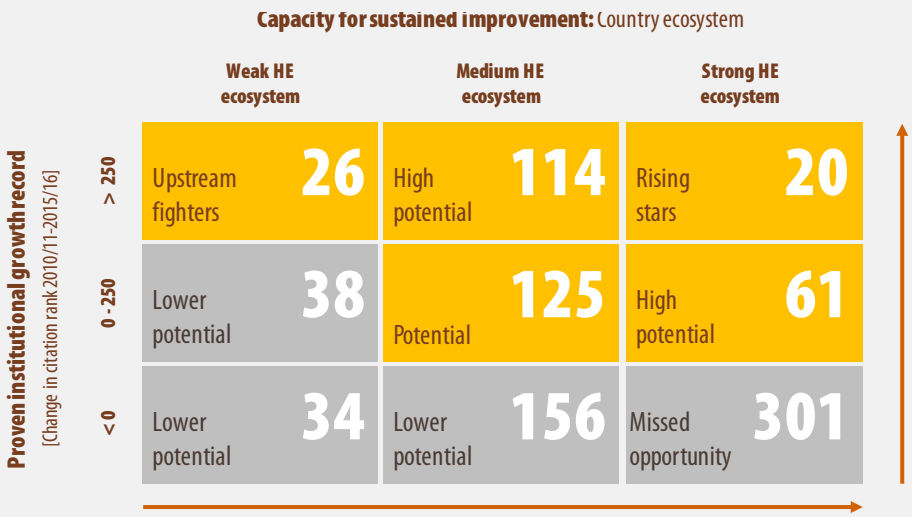
Compare to Quaid I Izam University in Pakistan or the University of Yaounde I in Cameroon. They are the leading research institutions in their countries. They have equally strong potential to shape the future, but they face different challenges: upgrading basic infrastructure, gaining brand recognition to attract international students and influencing government policy to create strong nationwide frameworks.

Turkey shows how the Class of 2030 might take the establishment by surprise. Kafkas, Dumlupınar and Doğuş universities were all founded in the 1990s, and have each risen by 700 to 1,000 positions in the global research rankings since 2010/11. They have risen consistently every single year and rarely less than 100 places. How many do you think are well known outside of Eastern Europe?

While these three universities are very different– for a start, Doğuş is private and the other two are publicly run – they all focus on economically-relevant study that leads to higher earning graduates and high impact research, particularly in the applied sciences. They also have a shared desire to pursue international partnerships. Doğuş highlights international links and its Erasmus scheme. In September 2015, Kafkas agreed to develop a joint Computer Science degree program with the University of Wisconsin-Superior. This isn't the only way for new universities to thrive, but it's certainly proved compelling for these three.

None of these institutions are in the top 1000 and most global rankings pay little attention below the top 500. Yet if one of them can keep rising at 100 places a year for the next 5-10 years, I can bet we'll be hearing a lot more about them. Such progress would be a considerable feat and the odds are still against them – but bear in mind they are already four years in and haven't missed a step.

Potential Class of 2030 Universities [# universities]



Our list does not seek to be complete, both due to the limitations in approach and due to the limitations in the underlying URAP rankings, where not all universities are listed or listed correctly each year.
Source: URAP, WDI, UNESCO

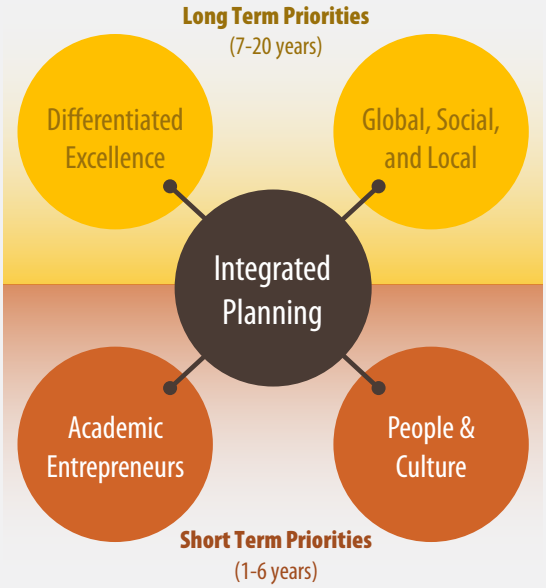
Altogether, we identified 346 institutions as potential candidates for the Class of 2030. We then approached a sample to ask them what they were up to, their view of global trends and how they planned to keep on improving over the next decade. These conversations contained a varied treasure trove of ideas, but here we will focus on some common problems that most agreed needed to be solved to succeed in the long-term.

3. HOW WILL THE CLASS OF 2030 SUCCEED?

The universities that we spoke to had made a clear commitment to becoming regional or global leaders. The overriding message is that sustained, rapid improvement does not happen by accident – it is the result of deliberate and determined strategy, executed consistently over the long-term.

The institutions we reviewed, both as potential Class of 2030 graduates and as the Young Champions that inspired our work have much in common. But they also operate at very different local, national and regional contexts, with their own influences and constraints. The end result is that different institutions are defining and pursuing success in a rich variety of ways.

Nonetheless, clear common factors came through. The model below captures how successful universities think about long-term direction and shorter-term priorities – linked together by a robust and inclusive planning process.



Differentiated Excellence
"The Class of 2030 know what makes them special in a specialised global marketplace – and invest in it consistently"

Global, Social, Local
"The Class of 2030 know their market, capitalise on global trends and serve their students and communities – they make a difference on topics that matter"

Integrated Planning
"The Class of 2030 take long-term strategic planning seriously – with an inclusive focus on development, implementation and innovation"

People and Culture
"The Class of 2030 will attract and develop excellent staff – both as teachers and researchers – and trust them as excellent managers"

Academic Entrepreneurs
"The Class of 2030 are creative in finding new sources of revenue to match their ambitions – but recognise their constraints"

Developing a long term vision relies on strong leadership and a clear strategic analysis that is open to structural change and innovation. The leaders we spoke to were focused on imaginative opportunities for growth even where budgets were under pressure. Most would agree that they excelled at some of the five aspects listed above, but none excelled at all five.

DIFFERENTIATED EXCELLENCE

"An academic world consisting only of Harvard-like institutions would be extremely boring"

President of a European University

"Universities' elevator pitches often sound similar – wholesome and worthy – and typically well-intentioned. But if you switched the logo on the website, would anyone notice?"

Deputy Vice Chancellor, European University

What does it mean?

Winning in a global context requires a distinct vision that attracts staff, students and funding, and unites them around a common identity. The very best and longest-established universities in the world have developed brands that are well-known across diverse areas. Many universities, in practice, have undifferentiated strategies.

Challengers will do better to find a niche and claim it as their own. Our interviewees were targeting specific areas of focus, building on their credible strengths and celebrating what makes them different.
Even if a university is the best in its country and offers a wide range of activities for domestic students, it will still need to differentiate to be effective internationally or across its region. Differentiation comes in many forms, building on external factors like geography or nearby industries or internal features like facilities or course reputation.

Examples

The University of Texas Arlington describes itself as the model 21st century urban research university. The emphasis is on urban. The university highlights its location at the centre of one of the country's largest conurbations – the Dallas-Fort Worth Metroplex. They recognise that "megacities" are a key feature of the modern world and direct significant research expertise towards understanding and supporting these extraordinary new forms of human settlement.

BOKU in Vienna, Austria, derives its mission from a sense of global responsibility for sustainable development and renewable resources: How to feed the world. This has driven investment into new chemistry and food science laboratories, alongside selective overseas partnerships and a globalisation strategy to introduce English as a second working language and English coaching for academic staff.

When is it difficult?

If differentiated excellence is to mean anything, it must translate into investment decisions and tough choices. Structural innovation is difficult. Focus means not doing certain things, or stopping certain things.

A university in Ireland explained their reasons for not having a medical school or heavy engineering, unlike many other universities in the region. The Swinburne University of Technology in Australia shrank the number of undergraduate courses it offered, but added a law school. The strongest differentiators are reinforced through multiple aspects simultaneously and thread themselves through a university's strategy. Macau University's sense of itself at the border of Sino-European interaction translates into investment in joint courses, English language teaching, and international marketing.

For many of the universities we spoke to the long-term direction was clear. On occasion it had emerged organically, even "obviously" out of external circumstances. As one President we interviewed said: "We didn't need a formal process of picking things – we've been knowing where we want to go all along." For some universities, however, it is possible that multiple competing options exist for possible longer-term direction, where there is no obvious winner - or where the natural winner to date isn't quite working.

In these circumstances, universities would do well to take a structured, thoughtful approach to choosing their direction: drawing on an inclusive, community-based approach, informed by trend scanning and a critical examination of their strengths and opportunities.

DIFFERENTIATED EXCELLENCE – CHECKLIST

- What are the unique strengths of your institution? What data proves this?
- What are the implications of your chosen areas of focus? How does it translate into investment, fundraising, staffing, partners, courses and other choices?
- If asked, would your staff name, unprompted, the same areas of differentiated excellence?
- What could you stop doing?

GLOBAL, SOCIAL, AND LOCAL

> *"Women have been neglected for too long. We empower women – and they have become our medal winners in the sciences. When you move forward, even the wind will offer resistance."*
>
> Vice Chancellor of a South Asian University

What does it mean?

A university's pursuit of long-term success is enhanced when it is outward-looking, connected and aware of its context. They need to be locally-relevant, socially-aware and globally-connected.

Once an institution has these perspectives, it needs to act on them and bring them into the decision-making process. Interviewees repeatedly highlighted the importance of being a force for good in the world over and above "merely" being a well-run institution (not that that isn't already a tough target).

Examples

A global outlook almost always involved the use of strategic partnerships with foreign universities, whether as simple as facilitating student exchanges or based on issuing joint degrees and conducting joint research activities.

The University of Central Lancashire in the UK has some 120 international partners. In countries with weaker domestic HE sectors, universities are even more ambitious: Universidad de la Frontera in Temuco, Chile describes a remarkable 250+ cooperation agreements with some 190 universities. Getting the most out of partnerships needs dedicated units focused on developing and operationalizing relationships – and an approach that recognises when small, tight, action-focused networks are better than larger ones.

Ambitious universities might also aim to support needs in their immediate surroundings, even if not directly related to their focus points of differentiated excellence: For instance, a university in Colombia worked hard to contribute to the local peace process and has invested in a School of Ethics in Public Government out of concern for corruption.

When is it difficult?

The key challenge is to balance competing objectives and identify opportunities that thread through them. For instance, attracting local students and serving them well requires an understanding of local market needs – but those needs may not line up easily with a social purpose that inspires and fosters unity or match a particular global trend.

At the same time, organisations need to make sure they have good reasons, derived at through systematic analysis and tested objectively, for following particular trends – it is all too easy to jump on the latest bandwagon.

On a practical note, a global outlook may also require introducing more English language for teaching and research, in order to tap into broader networks and ensure work gains greater readership. Where overseas students represent a revenue driver for the university, we heard about successful efforts to develop partnerships with high schools in potential feeder countries, based on inviting senior staff to visit the university and finding reasons to stay in touch.

LOCAL, SOCIAL, GLOBAL – CHECKLIST

- Do you have a structured, objective process for identifying what your local context needs?
- Are you considered a leader among local partners, governments and employers, why?
- Is there a social purpose threaded through your organisation?
- Which global trends will affect your institution? How do they relate to your institution's objectives?
- Do you have a strategy that explicitly capitalises on long-term trends?

INTEGRATED PLANNING

""If you're asking me did [strategic planning] take a lot of staff a long time: Yes. If you're asking was it worth it: Absolutely. Yes."

President of a North American University

What does it mean?

Long-term planning in universities is notoriously hard. It is often bottom-up and budget-driven. A 'strategy' can be little more than taking all the departmental budgets and adding them up, adjusting for this year's changes. But this isn't good enough - pursuing a vision needs to be inclusive and strategy driven.

Our interviewees recognised that you need a disciplined way to translate grand ambitions into day to day work. For most, this was an inclusive process, both in developing and implementation. It was important to many that staff feel involved and committed to a new strategy.

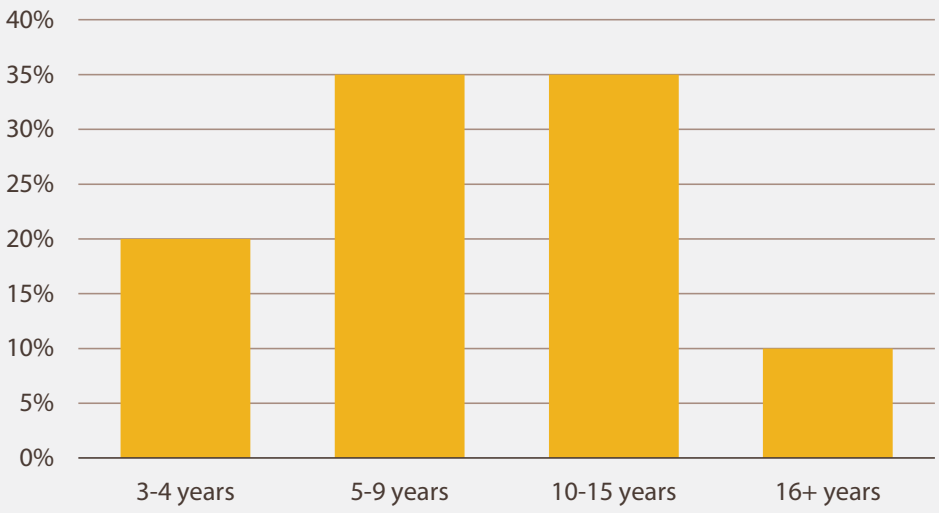
The long time horizons and uncertainty around ambitious change point towards the need for graduated planning. In this approach, the next one to three years are well-specified, with costed initiatives and staffing plans, alongside a clear approach to evaluating individual initiatives. Year four to year ten has a broad arc of activity supported by a set of quantified targets for institution-level KPIs, considering the relevant and plausible industry trends that might affect their core specialities. Meanwhile, the following decade or two is clear in terms of financing requirements, particularly major estate investments are needed and the broad number of students and researchers that need to be housed in order to maintain progress towards the long-term vision – but the detail is not set out.

Examples

Among our interviewees, the shortest amount of time dedicated to the creation of a strategic long-term plan was about 6 months – and the average nearer 12-18 months. This time was often necessary for extensive consultation and engagement with different faculties and departments, as well as multiple iterations and new, independent research to inform their conclusions.

One university had a regular rolling planning period of about five years. While this created a gap in formal long-term planning, informal planning by the senior leaders was able to partly fill the gap. As the president told us: "I know I need a building there in 10-15 years' time and it will be a physics building and I'm planning for that financially – but I'm not going to decide what I put in it until nearer the time."

Strategic planning horizons: Potential Class of 2030 universities



The risk with informal long-term planning is that turnover in senior staff can result in good ideas being lost or that the lack of documentation and tracking makes it hard to sort the great ideas from the average

Becoming a world class institution is the work of a generation, a timeframe over which national policies not only matter a great deal, but can also be influenced – and yet we saw many universities for whom Government engagement was a side priority, perhaps even a poor investment of time. Nonetheless, when universities engage collectively and deliberately over time, they can make a difference. In one example in Eastern Europe, we heard how long-term engagement with Government had helped extend the budget planning cycle from one year to three years – making it much easier for universities to plan ahead.

When is it difficult?

Most universities we spoke to felt that short-term strategic planning was a strength, but were conscious of some key tensions:

- **"The road is longer than the headlights":** How to maintain progress over the decades that it takes to become a world-class institution, especially given planning horizons that tend to top out at 5-8 years? Not to mention budget cycles that tend to be only 1-3 years?
- **"But nothing stays still long enough":** How can you plan for the long-term when Government policy is hard to predict, economic cycles keep changing, and senior leadership will change?
- **"It looked so easy in black and white":** How to engage all the stakeholders, faculties and departments across the university, so that what is written down actually happens?
- **"What gets measured gets done":** We know when we're doing well at an overall institution level, but how can we test whether individual initiatives are successful?

PEOPLE AND CULTURE

"Culture eats strategy for breakfast."

Vice-President for Innovation at a European University

What does it mean?

Given that our interview criteria selected institutions based on research excellence, it was fascinating that student experience and teaching were so strongly emphasised in our conversations. Priorities given by our interviewees were an equal emphasis on teaching and research, alongside the benefits of devolved management.

Different organisations will take different routes to achieving a strong culture with excellent people. Those that took a long view expressed a clear preference for growing expertise within staff rather than buying in high-profile names – although the latter approach can work well to provide a short-term marketing boost to get an institution onto a new track. There was also a clear recognition that the clearest way to change culture was to change personnel. Those with a clear vision used it for recruitment – "we hire for people aligned to our attitude".

Examples

For most of the universities we spoke to, it made sense to develop and retain their own staff. If this can be balanced with requiring long periods of time prior to granting tenure, the downside risks can be well managed. As one senior leader told us: "We will not attract 25 Nobel Prize winners, but we can attract 25 future Nobel Prize winners."

One university indicated the importance of hiring excellent people and "following through." By following through, he meant providing those people the freedom to make decisions and run their departments. "Why spend time and money hiring someone for their insightful, inquiring mind, and not allow them to apply themselves to the task of leadership and management?" We also observed very different successful approaches to attracting talent. POSTECH in Korea concentrated on attracting the Korean diaspora back

home, filling its first tenure primarily with overseas Korean PhDs, who then benefited from fast promotion. Sabanci in Turkey and HKUST in Hong Kong emphasised world-class facilities and salaries to attract global talent.

When is it difficult?

Difficulties in measuring and rewarding teaching excellence continue to be a challenge – compared to the quantitatively straightforward, if conceptually limited ways of measuring research output.

Other challenges around talent attraction and retention, alongside creating a strong culture, are significant and common across all large organisations. How to use pay and performance-based pay to drive success? How to induct new members of staff so that they feel part of a common team? How to decide when to import talent vs fostering it internally? How to ensure decision making consistency and build trust among staff?

PEOPLE AND CULTURE – CHECKLIST

- What are the skills and capabilities the institution needs to be successful?
- What are the incentives that help or inhibit staff members' contribution to the success of the long-term vision?
- Is there a clear approach and rationale for driving improvement in staff quality over a ten year period?
- Is there a way for stakeholders to "constructively disagree" and then act as a team?
- Do you have ways of measuring and rewarding teaching success?

ACADEMIC ENTREPRENEURS

"Vision without funding is hallucination"

Director of Global Affairs at an East Asian University

What does it mean?

Entrepreneurship in this sense is about pragmatic and innovative approaches to meeting needs and looking for different ways to respond to different demands.

Most of our interviewees were considering a wide range of opportunities, from traditional routes such as increasing student numbers in profitable segments and finding new sources of research grants, to innovative areas like IP spin-offs, patent divisions, business consulting, and joint business partnerships. Philanthropy and alumni fundraising were also areas where interviewees planned to invest and innovate. Creativity and ambition in idea identification and development must be followed by pragmatism and realism in designing plans and creating revenue forecasts. Many recognised it is not just about total resources, it is also about innovation in institutions, structures and partnerships.

Examples

Examples of understanding and meeting local needs can be found in Maastricht University, Dundee University and the National University of Singapore (NUS). Maastricht University specialized in medicine following a national staff shortage – innovating in problem-based learning at the time and innovating again in 2011 when it developed a popular interdisciplinary science degree. Dundee in Scotland forged an early reputation for high skill vocational courses in dentistry, law, engineering, accountancy etc. It has since become the centre of a biotech hub with strong industry links and spin-off companies accounting for 16% of the local economy. NUS specialized in cancers that are unusually common in Asia, like non-smoking lung cancers.

Crucially, entrepreneurship involves working flexibly with the communities and opportunities around you. Louisiana Tech University developed an expertise in cyber security based on nearby military facilities. Maynooth University in Ireland co-founded a research institute with a major Intel manufacturing facility nearby – the institute brings in significant external funding and enables them to bridge the gap from research to application in key areas like smart cities and the "Internet of Things".

Seeing growing local interest in China and the trend towards continuing education, the University of Western Sydney has innovative packages of undergraduate and postgraduate study with credit recognition for parts of the study undertaken in China. Recognising the importance of employability to its students, Swinburne University of Technology, also in Australia, offers practice-based PhDs almost entirely based in the workplace. The programme has been designed to support the research development of senior practitioners in the fields of management, education or other appropriate professional areas, and to bring benefits to the organisations in which they work.

When is it difficult?

Most universities we spoke to felt that they were missing opportunities to do more with business. Some had invested in incubation facilities but offered very little by way of consultancy services. Others participated in joint research bids with industry (such as the InnovateUK grants in the UK) but had failed to invest in follow-up patent opportunities. There was a sense that working with the private sector was not a core, traditional area of work for a university and that it was hard both to analyse where the best opportunities lie and subsequently to generate consensus and capacity to invest adequately in them.

Fundraising and philanthropy, from alumni and globally minded donors, was another common priority. Several universities complained that there was no alumni giving culture in their country or that their students were not as closely aligned to their university, but most felt (or feared) they had little ability to influence this, even within their own institution or over the longer term.

ACADEMIC ENTREPRENEURS – CHECKLIST

- What are the opportunities for institutional and structural innovation?
- Does financial planning operate at different levels of detail that enable 20 year capital investment projects?
- Is there a long-term, ambitious rationale for the engagement of alumni / donor fundraising and other philanthropy?
- Are staff empowered to respond quickly and explore creative ways to engage business?
- Are all avenues for revenue diversification systematically and regularly examined?

SUMMARY

Firetail believes that, over the timeframes that matter, the world of higher education is highly innovative – and will be ever more so in the next ten to twenty years.

The world is transforming in the face of disruptive trends like globalisation, the role of government, resource scarcity, emerging markets and productivity and talent management. Alongside vast and unprecedented increases in the number of university students, projected to exceed 250 million by 2025, there are opportunities for entirely new business models to emerge.

Rather than appearing from the ether, history suggests that innovation in higher education is more likely to emerge from within the sector, but that does not necessarily mean the same top fifty global names that are so familiar today.

Inspired by the fast progress of certain Young Champion universities founded in the last 50 years, we set out to identify fast improving universities from the current mid-rank of global league tables and ask them how they planned to tackle future challenges. We were struck both by their ambition and their deliberate, long-term focus.

But universities are complex institutions and face many challenges: how to tread the fine line between specialism and generalism, between teaching, research and public debate, how to balance strong leadership with fostering independence among an exceptionally bright cadre of staff. Effective strategies require a tolerance of ambiguity, an ability to make and evaluate decisions under uncertainty: universities need to find the common ground between a roomful of smart but divergent opinions and the unassailable resolution that might only be possible with a three-year randomised control trial.

Our interviews with the leaders of fast-growing universities makes it clear they are intimately aware of global shifts in the higher education landscape and busy planning how best to exploit them. Establishment be warned!

A FINAL THOUGHT: HUMBOLDTIAN TENSION

"Our main topic is impact, in both the Humboldtian sense, and the business sense. How do we conceptualise this tension? Maxwell's equations were never related to business impact."

Vice Rector, European University

Wilhelm von Humboldt (1767-1835)

"As soon as one stops searching for knowledge, or imagines that it need not be creatively sought in the depths of human spirit but can be assembled extensively by collecting and classifying facts, everything is irrevocably and forever lost."

Many of our conversations about future success deliberately focused on the pragmatic building blocks of strategy, management, analysis and planning. In this context, several interviewees raised more profound concerns about what it means to succeed. Is there a risk that Higher Education is reduced to a means to some other end, rather than an end in itself?

At worst, if universities become little more than outsourced corporate R&D labs or training centres, they have lost something fundamental of themselves.

Successful universities have always sought to develop autonomous individuals and world citizens. They have built their institutions upon the principles of academic freedom and education as an end in itself.

Once the conversation turns to the mundane tasks of working out what the local economy needs, how to monitor teaching quality, or how to balance the budget, some cautioned against moving away from this vision of a public good. But others felt that this argument was often used as an excuse for inaction, or for dodging difficult choices. It was a way for some academics to avoid oversight, or deny their accountability to wider concerns.

There is no easy resolution to this tension, though we do observe that freedom in the long-term has little value if you cannot survive the short-term. In some respects, it is a false dichotomy. Getting the basics right is what earns you the freedom to pursue more noble goals. Even the swiftest genius will make little progress if she does not condescend to eat. At the same time, we recognise discovery is non-linear. The role of serendipity, curiosity and accident cannot be overlooked, or reduced to simple targets.

Let us hope that the Class of 2030 can strike the right balance between the pragmatic and the speculative, the short-term tactics and long-term vision. The successful institutions will be those that can combine the curious spirit of academic enquiry with the desire to make an impact – we need to live in a world with both.

BIBLIOGRAPHY & FURTHER READING

For this report we have used a variety of sources. We analysed key articles on the role of universities in society, on the higher education sector and on how different aspects of universities can be developed or stimulated. We also consulted the strategic documents of the universities we spoke with and of other universities, drawing parallels, finding out the interesting and the difficult parts of university's strategies and strategic documents.

Additionally, there are some reports that are connected to this piece of work and that are relevant to the topics discussed, but that do not quite fit within the scope of this work.

Below we have compiled a list of selected articles for those that are interested in reading further about these issues.

READING LIST

- **The World-Wide Expansion of Higher Education in the Twentieth Century (2005). American Sociological Review Vol 70, No 6. Evan Schofer and John W. Meyer**
  This paper takes a historical approach to the higher education sector and addresses the value and development of education and universities throughout the years. Access here
- **The Road to Academic Excellence (2011). The World Bank. Edited by Philip G. Altbach & Jamil Salmi**
  This lengthy (394 pages) report analyses the characteristics of a world class university, based on 9 case studies of universities across the world. Access here
- **The challenge-driven university (2016). Nesta**
  This short report focuses on the changing approaches to education of universities around the world, offering a 'challenge driven' education. It provides short examples of new teaching models of universities around the world. Access here
- **Towards a strategy for internationalisation: Lessons and practice from four universities (2004). Journal of Studies in International Education. John Taylor**
  This article addresses internationalisation, its role in universities and how different universities take steps in this direction. It is supported by a closer look at four universities' internationalisation strategy. Access here
- **Top teams and strategy in a UK university. Journal of management studies (2002). P Jarzabkowski, DC Wilson**
  This paper reports on the results of an in-depth study of how a well performing management team puts strategy into practice in a UK university
- **The New Work Order Report (2014) Foundation for Young Australians**
  This report discusses the skills and capabilities that young people will need to work and live in the world of today, and how different ways of learning can contribute to this, with examples from Australia. Access here
- **The fourth age of research (2013) Jonathan Adams. Nature**
  This paper analyses literature from the past three decades and discusses that the best science comes from international collaboration. Access here
- **2015 U21 Ranking of National Higher Education Systems. Universitas21**
  This report presents results of an annual ranking of higher education systems, evaluated on the basis of 25 attributes grouped into the modules Resources, Environment, Connectivity and Output. Access here
- **The nature, scale and beneficiaries of research impact (2015). Jonathan Grant, King's College London. Prepared for Higher Education Funding Council for England.**
  This report is based on an analysis of 6,679 Research Excellence Framework impact case studies and highlights interesting themes around the assessment of research impact an the role of universities in society. Access here

ABOUT FIRETAIL

Firetail is a strategy consulting firm that works with some of the most outstanding universities, research organisations and civil society groups in the world.

We have extensive experience of running transformational strategy projects for clients at the most senior executive levels. We understand how to develop strategic options based on solid analysis, how to secure engagement and support from senior stakeholders in complex environments and how to deliver practical, actionable solutions.

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HIGHER EDUCATION EXPERTISE - SELECTED PROJECTS

International Growth Centre – London School of Economics

Brand and communications strategy
- Development of long term view on IGC communications and priorities
- Informed decision making about key audiences and ways to maximize impact

Migration Observatory – University of Oxford

Evaluation of the Migration Observatory, based in the ESRC Centre on Migration, Policy and Science (COMPAS)
- Two-year evaluation of the Migration Observatory to assess overall approach and impact across strategic objectives
- Based on a series of interviews with senior level stakeholders and quantitative data analysis

Agriculture for Impact - Imperial College London

Evaluation of agricultural advocacy initiative
- Baseline, peer review and end of programme review informing initiative's new strategy
- Interviews with key decision makers in the UK, EU, Africa and the US

Tegemeo. Nairobi

Institutional strengthening and business planning
- Tegemeo, part of Egerton University, is Kenya's leading agricultural policy and research institute
- Firetail have worked in partnership with Tegemeo to strengthen its ability to compete in a global market
- This has included strategy development, fundraising plans, business planning and capacity development

Royal Society of Chemistry, London

Scenario development and future strategy planning
- Futures programme to help the Society plan for the long term and consider changes in the landscape
- Engagement with senior stakeholders from learned and professional bodies, academia, government and industry

Ministry of Planning and Investment, Vietnam

Fostering a strong, region-leading university in Vietnam
- Review of success factors at high performing Asian universities
- Analysis of key education/industrial features in Vietnam
- High-level proposal for targeted higher education investment

Integrated Regional Information Network , Nairobi/Geneva

Evaluation, feasibility study and development of business planning for humanitarian news service formerly part of the UN
- Firetail's review identified a new future for IRIN as an independent NGO
- Recommendations were endorsed and IRIN successfully became an organisation with a new structure and secured funds from a number of major donors

International Council for Science, Paris

Strategic planning and evaluation
- ICSU is a global membership organisation that represents the science community as a 'major group' at the United Nations. Firetail worked on their international research initiative, Future Earth.
- Our support included stakeholder research with key user groups from government, industry and civil society.

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