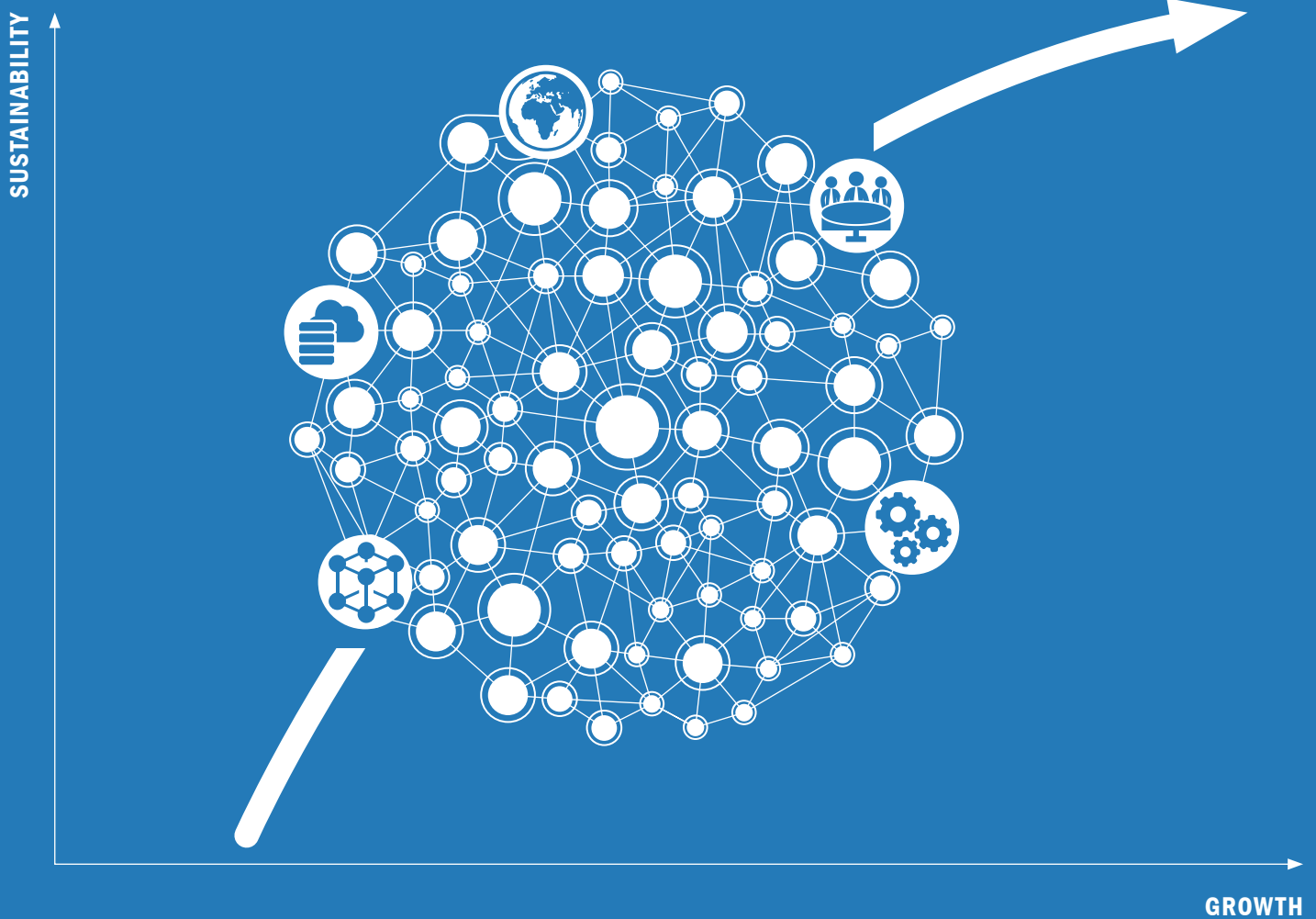


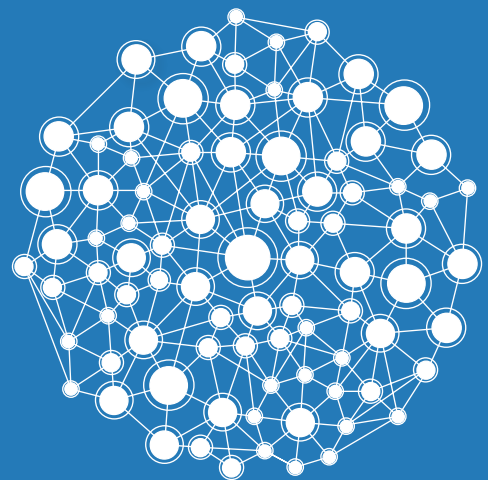
THINK ACT

POINT OF VIEW



THE ECOSYSTEM-BASED BALANCED SCORECARD (EBBS)

Since its invention, the usage of a Balanced Scorecard by companies' executives to steer their organization has kept on increasing, making it one of the most widespread management tools in the world. It has been so successful because it connects the organization's operations with the financial measures used by shareholders to evaluate performance, and translates strategy into action. Despite its appeal and successful track-record, an important risk of the Balanced Scorecard lies in the fact that it remains constant when the environment is changing, and can thus lead to managerial inertia. As currently the drivers of success in business are rapidly changing, a more radical update of the Balanced Scorecard is required to ensure that the drivers of success are sufficiently captured.



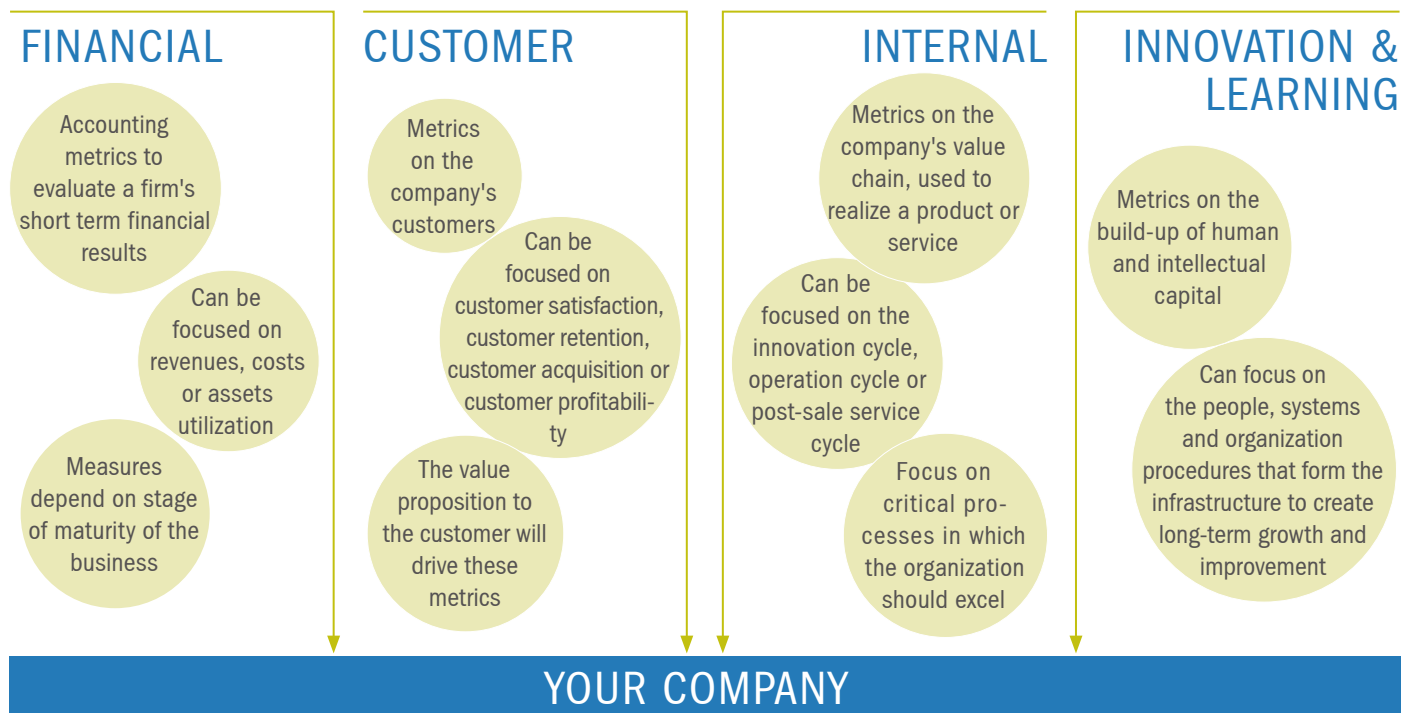
Many companies use a Balanced Scorecard to reach their strategic goals.

The Balanced Scorecard is one of the most widespread management tools in the world. It has reported usage rates of 40-60%¹ in large companies, whose executives use it to steer their organizations towards the achievement of strategic and financial objectives. The Balanced Scorecard consists of four perspectives (Financial, Customer, Internal and Innovation/Learning). For each perspective, Key Performance Indicators (KPIs) are identified. All these KPIs are connected via causal relationships, with the strategic objectives and financial targets as ultimate goals. In this way, the Balanced Scorecard connects the organization's operations with the financial measures used by shareholders to evaluate performance, and translates strategy into action. ^A

Having one framework that captures the non-financial drivers required to reach the organization's financial objectives obviously has instant appeal to an executive. In academic circles too, however, the concept designed by Kaplan & Norton in 1992 was immediately accepted with great enthusiasm². Not that the idea that KPIs should be tracked to measure whether management goals are being realized was entirely new. Many organizations had already been tracking KPIs for decades, using for example the "Tableaux de Bord" technique developed in Europe. However, the KPIs that were being tracked before the development of the Balanced Scorecard were often not the most relevant ones. There were many blind spots, and in most cases the KPIs were not in line with the company's strategy. Crucially here, the

^A

PERSPECTIVES



¹ Average reported usage over several surveys that were made between 2007 and 2014 for EU and US companies

² Kaplan & Norton (1992), "The balanced scorecard: measures that drive performance"

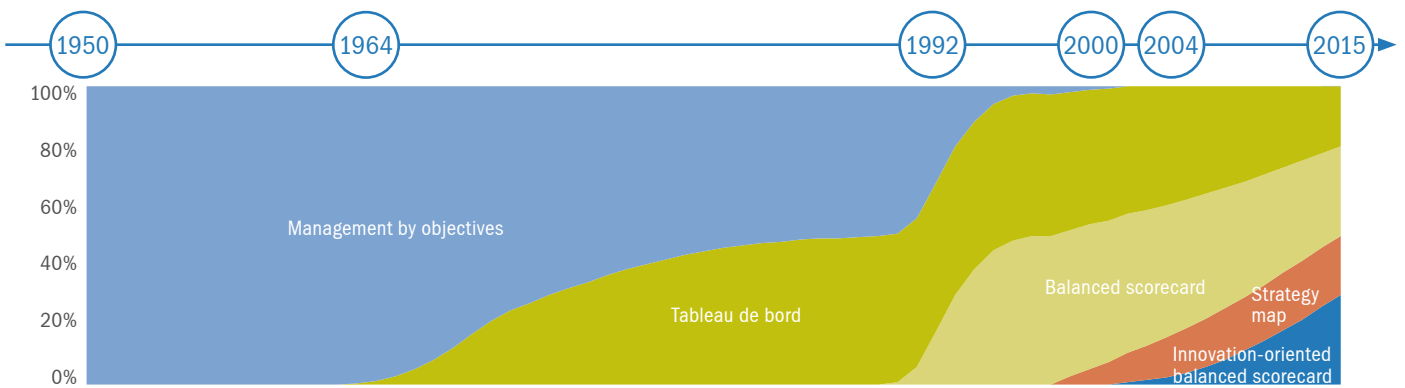
Balanced Scorecard offered a framework for identifying the right KPIs, leading to a more comprehensive view. **B**

From our experience, we noted how drawing up a Balanced Scorecard can be a very valuable exercise for a company's management, compelling reflection upon strategic choices that have been made and their implications for all domains of the company. We saw in many cases how a well-defined balanced scorecard with the right metrics across all functional areas made a strategy work that had previously been considered to be inoperable. Yet, successful implementation of the Balanced Scorecard approach is not an easy task. In order to be successful, it is crucial to identify the right drivers and define them in an indisputable way, ensure that the KPIs are identified at the right level (where the improvement potential can be found) and

facilitate communication by clearly showing each unit's responsibility and drawing an overarching strategy map. Where the Balanced Scorecard is used to reward members of a business unit, the metrics included should only be those the members can influence.

Despite its appeal and successful track record, an important risk of the Balanced Scorecard lies in the fact that it remains constant when the environment is changing, and can thus lead to managerial inertia. Several attempts have been made to further refine the basic concept (such as the more innovation-oriented systemic scorecard)³. However, as the drivers of success in business are currently undergoing rapid change, a more radical update of the Balanced Scorecard is required to ensure that the drivers of success are sufficiently captured.

B
BALANCED SCORECARD – ESTIMATED HISTORIC USAGE BY TYPE



KEY INSIGHTS	MANAGEMENT BY OBJECTIVES	TABLEAU DE BORD	Critique that performance measurement is not supporting the companies' strategies	Critique on using only financial indicators: they are backward looking by construction, and lead to short-term thinking	BALANCED SCORECARD	STRATEGY MAP	INNOVATION-ORIENTED SYSTEMIC SCORECARD
	Definition of each individual's responsibility in reaching management goals	Nested structure of key performance indicators for all sub-units			Four perspectives to facilitate the transition of strategy into action	Articulate strategy and measures of success in an over-arching cause-effect relationship to facilitate communication	Shift to drivers of success in the innovation economy Network focus instead of internal focus
REFERENCE WORKS	Drucker (1954), "The practice of management"	Laurel & Cibert (1962), "Des ratios au Tableau de Bord"	Kerr (1975), "On the folly of rewarding A while hoping for B"	Parker (1979), "Divisional performance measurement: beyond an exclusive profit test"	Kaplan & Norton (1992), "The balanced scorecard: measures that drive performance"	Kaplan & Norton (2000), "Having trouble with your strategy?: Then map it"	Voelpel et al. (2005), "The tyranny of the BSC in the innovation economy"

³ Voelpel et al. (2005), "The tyranny of the BSC in the innovation economy".

The world, the company's environment and the company itself are changing at a rapid pace. Hence, a radical update of the Balanced Scorecard is required.

We have identified three major trends impacting companies and their Balanced Scorecard: first, starting at the macro level, the VUCA environment; second, digitization, which is transforming the companies' overall environment; finally, at the most granular level, Industry 4.0 which is disrupting the way industrial companies operate. For each of these trends, we assessed the impact on how the Balanced Scorecard should look.

In a world that is increasingly Volatile, Uncertain, Complex and Ambiguous (VUCA), the Balanced Scorecard needs to be re-shaped to increase agility and flexibility

Executives have always had to adapt to a changing environment if their companies are to survive and thrive. However, adaptation is becoming more challenging as the world is becoming more and more VUCA – Volatile, Uncertain, Complex and Ambiguous.

In this world, the speed of change is increasing, requiring agility from companies. As several aspects of the world might change, companies need to be flexible and adapt continuously. Organizational structure, routines, processes, business models, assumptions, conventional wisdom - all are impacted and must play a role in meeting the challenge to adapt. Companies can react to this by acquiring or sharing the required skills and capabilities in an evolving environment. They also need to set up the required steering systems, enhance their robustness in case of unexpected events, increase their sensitivity to dynamics and enable decisiveness and quick reflexes.

As a result, the Balanced Scorecard needs to be adapted in two ways. First, its content should become as agile as the company needs to be. Therefore, the KPIs followed should be questioned, reviewed and modified on a regular basis. Second, the way the Balanced Scorecard is used in companies will also have to evolve. It should be accessible at higher frequencies to enable quick decision-making, taking into account the volatility of the environment. To achieve this, the information collection process should be speeded up and the reliability of the data strengthened. **C**



Digitization is speeding up the companies' environment via information, communication and networking, impacting the structure and use of the Balanced Scorecard

Digitization changes the companies' environment in many ways: customers are approached following big data analysis, internal processes become faster and more accurate through direct communication with devices (the "Internet of Things"), all kinds of stakeholders are approached using social networks, internal data becomes accessible everywhere ("cloud computing"), and so on.

These developments not only reshape companies' processes, but also the way a company interacts with its environment: the speed of action increases; the amount of information shared grows; social networks become more important; and information access and communication change.

In this respect too, the Balanced Scorecard needs to be adapted in two ways. In its structure, networks/ecosystems become increasingly important instead of a sole focus on the company. Regarding use of the Balanced Scorecard, digital technologies create automation potential (automated data collection and report creation), but also customization potential – for instance, digital access to the Balanced Scorecard can be made subject to specific restrictions per group of authorized users. **D**

Industry 4.0 transforms industrial companies' organization, requiring a shift of focus from the organization to its ecosystem and offering potential in terms of data availability

The fourth industrial revolution is already under way. Like other revolutions, it is fast, disruptive and destructive, leaving no room for companies to ignore it or go back. Industry 4.0 will be an answer to the challenges lying ahead.

The development of Industry 4.0 will proceed at different rates in different industries but some cross-industry implications are, for instance:

CYBER-PHYSICAL SYSTEMS (CPS) AND MARKETPLACE
IT systems built around machines, storage systems and supplies linked up as CPS;

SMART ROBOTS AND MACHINES

Multipurpose "intelligent" robots able to adapt, communicate and interact with each other and with humans based on remote control;

BIG DATA

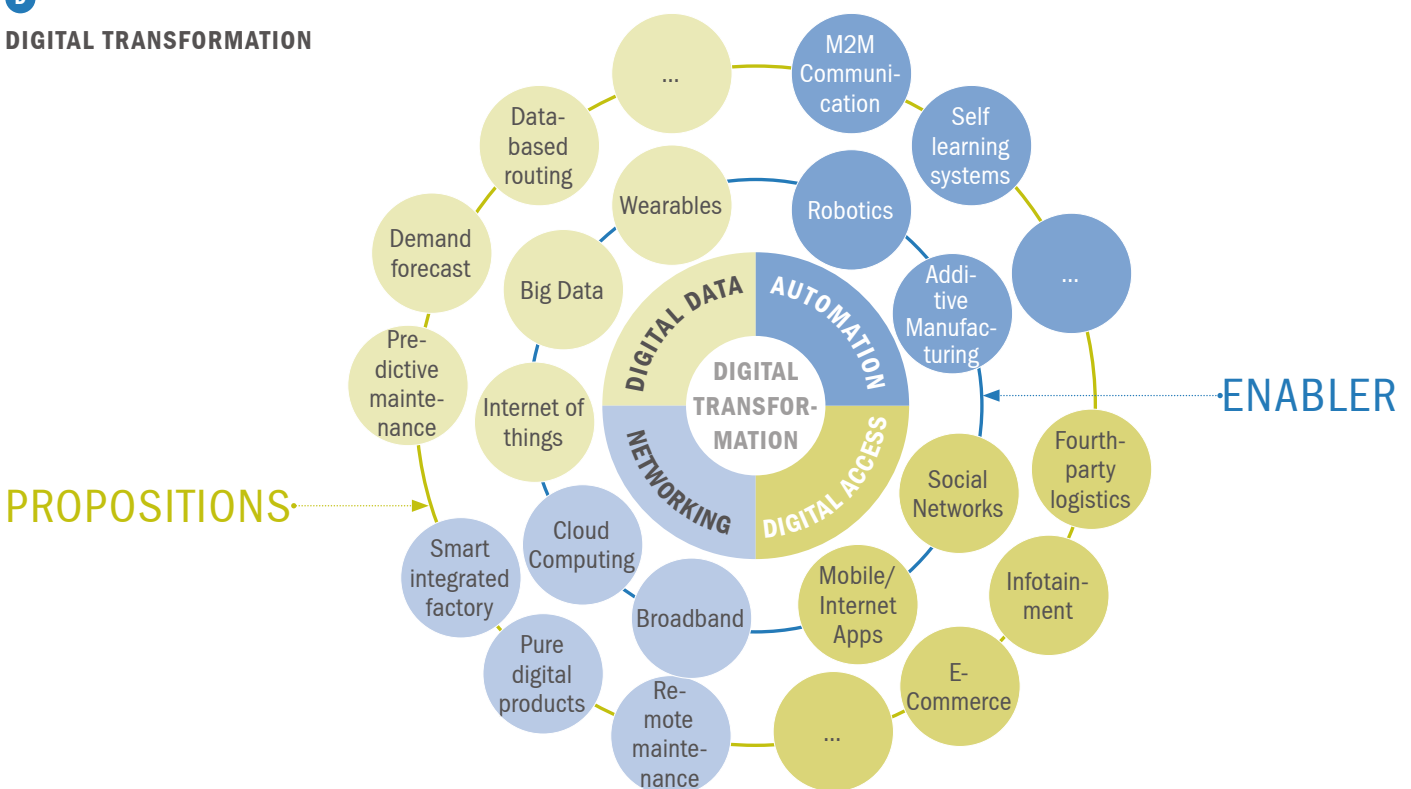
New methods for handling huge amounts of data and tapping into the potential of cloud computing;

NEW QUALITY OF CONNECTIVITY

Connection of digital and real worlds with constant exchange of information between machines, workplaces, systems and human beings;

D

DIGITAL TRANSFORMATION



ENERGY EFFICIENCY AND DECENTRALIZATION

Energy decentralization for plants, due to climate change and scarcity of resources;

VIRTUAL INDUSTRIALIZATION

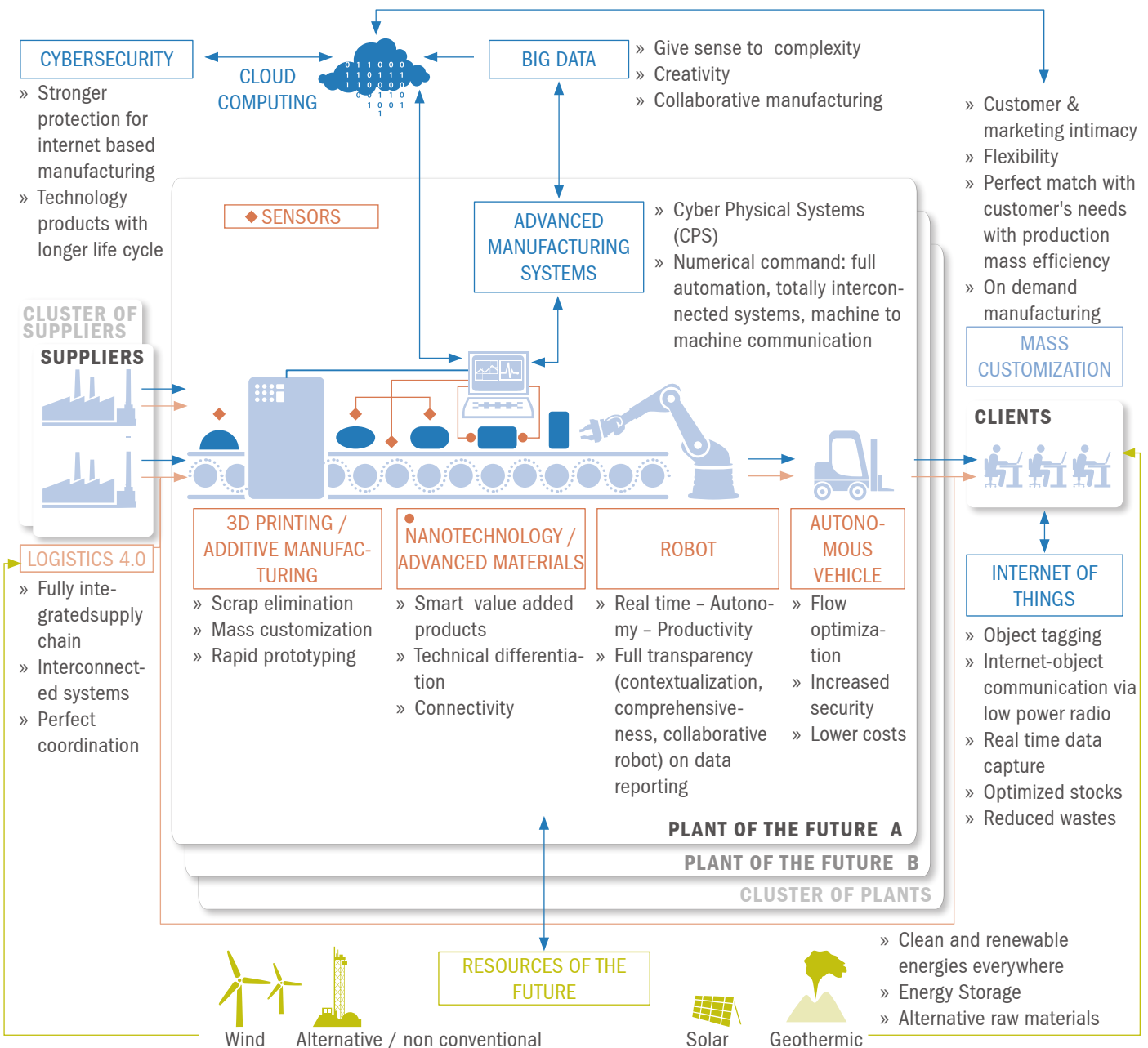
Virtual plants and products to prepare physical production via simulation, verification and physical mapping.

Industry 4.0, by bringing in new functionalities that will change the rules of the game for industrial players, will undoubtedly change the organization, processes, products and services, business models, competitive behavior and

capabilities for industrial companies. Industry 4.0 will therefore impact the companies' Balanced Scorecard in three ways: first, the increased connectivity implies that the scope must be extended towards the ecosystem; secondly, in terms of content, data valorization and security become a key focus; thirdly, regarding its usage, the multiplication of available information sources (structured/unstructured) is creating the need for advanced algorithms, allowing better real-time and large-scale data analysis. **E**

E

INDUSTRY 4.0



The Ecosystem-Based Balanced Scorecard (EBBS) integrates the factors that make today's businesses successful.

When looking at what makes future-oriented companies successful today, and highly likely to be successful tomorrow, we see that they not only acknowledge but also embrace the change we described above. For these companies, the traditional Balanced Scorecard no longer captures the drivers of their competitive advantage. We therefore propose an Ecosystem-Based Balanced Scorecard (EBBS) that puts the company's ecosystem at the centre of things instead of the company itself, broadens the perspectives to ensure that the new key success factors are covered and offers more usage possibilities.

From a purely company-focused to an ecosystem-centred scorecard

Many successful companies nowadays have built an ecosystem around them, engulfing other companies with which they are in a collaborative relationship. In many companies, especially industrial ones, we have seen since the 2000s that collaboration with suppliers and manufacturers has made it possible to offer superior value to the final customer, at maximum efficiency. However, some factors have more recently been pushing companies towards even more collaboration with an even wider set of partners. First, the development of new technologies has become increasingly expensive, requiring collaboration to cover the in many cases immense costs associated with innovation (e.g. Ford is collaborating with General Motors to develop a new generation of gearboxes). Secondly, mobile technologies introduced since 2010 are bringing companies together from different industries (e.g. banks and telecom operators, who collaborate to offer mobile payments). Thirdly, online price comparison sites (and online shopping in the broad sense) have increased competition in many companies' markets, compelling companies to collaborate in order to develop new types of offer. Utilities, confronted with the commoditization of their products, are for example integrating services (such as a repair service for home appliances) into their utilities offers, to make their business less vulnerable to commoditization. The performance of this additional service is mostly left to a partner.

Therefore, we are convinced that in this new world of ecosystems, companies should not only track and optimize their own internal processes, not only look to their own, direct customers and not only consider their own innovative capabilities. Instead, each company should focus on the value created by the ecosystem to which it belongs (Ecosystem value) and the company's own contribution to it (Ecosystem contribution).

FROM "CUSTOMER PERSPECTIVE" TO "STAKEHOLDERS"



Measuring how customers perceive the value of a company's product, and how customers behave, is crucial and is covered in the conventional Balanced Scorecard in the "Customer perspective". Although attention to customer metrics is crucial, KPIs should also be added on the overall stakeholders of the ecosystem, leading to a "Stakeholder perspective" in the EBBS. KPIs covered in this perspective measure, once again, the performance of the ecosystem (e.g. satisfaction of customers buying the end product, employee satisfaction) and the contribution to the ecosystem (e.g. quality of partner relationships, partner satisfaction).

FROM "INTERNAL PROCESSES" TO "MODULARITY AND AGILITY"



While in traditional Balanced Scorecards, the focus is put on the productivity and efficiency of internal processes (e.g. production time, number of calls taken...) we see that now it becomes key to have processes that are modular and flexible to make the collaboration with partners easier. As a result, the former "Internal processes" perspective becomes in the EBBS "Modularity and agility", and additional KPIs are tracked to measure the performance of the ecosystem (e.g. reactivity to stress events, production time of the final product produced by the ecosystem...) and the contribution to the ecosystem (e.g. supply chain integration, robustness of internal processes).

FROM “INNOVATION & LEARNING” TO “CO-CREATION AND KNOWLEDGE-SHARING”

As more companies experience the added value of partners when pursuing innovation (for example, as a result of knowledge exchange or in terms of cost sharing), they are evolving from adversarial to collaborative relationships. Therefore, the former “Innovation and learning” perspective is in the EBBS extended with KPIs measuring the performance of the ecosystem (size of common knowledge base, quality of the network...) and the contribution to the ecosystem (number of documents posted to the common knowledge base, number of internal experts advising partners...). **F**

Inclusion of today’s Key Success Factors

In recent years, new key success factors have been emerging. While in the past they were more related to the efficiency of processes, scale and the value proposition to the customer, we now see how the flexibility of processes, the usage of data and the focus on a long-term, sustainable company value are also important drivers of success.

FLEXIBLE AND ROBUST PROCESSES TO PROVIDE CUSTOMIZED SOLUTIONS

In recent years, technological developments (e.g. 3D printing, big data...) have made it possible to provide customized solutions on a large scale (“mass customization”). This type of solution creates high value to the customer, while the cost of it can

F

STRUCTURE OF THE EBBS

- » Accounting metrics to evaluate a firm's financial results
- » Metrics on the firm's environmental impact
- » Qualitative indicators of the firm's impact on people's lives (e.g. ethical rules infringement)

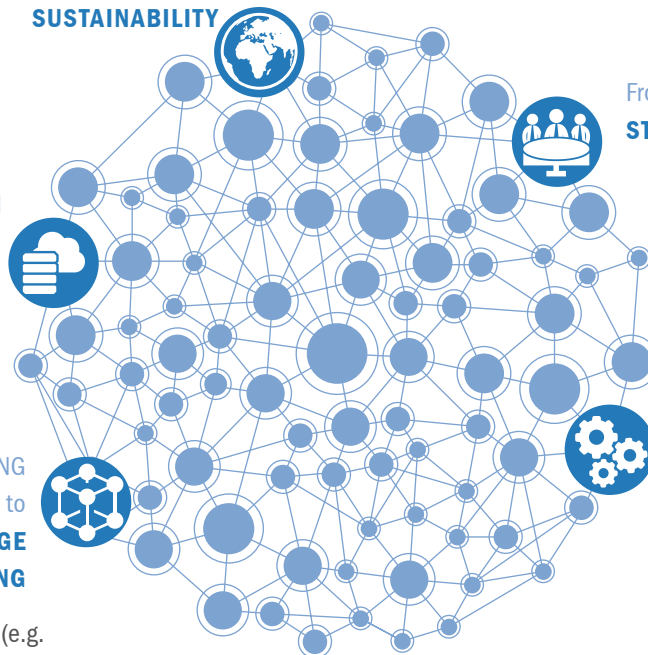
From FINANCIAL PERSPECTIVE to
SUSTAINABILITY

DATA VALORIZATION

- » Metrics on usage of data and reliability of information
- » Metrics on information storage and sharing

From INNOVATION & LEARNING
PERSPECTIVE to
CO-CREATION & KNOWLEDGE SHARING

- » Metrics on organizational capital (e.g. number of external experts used)
- » Metrics on information capital (e.g. size of common knowledge base, quality of the network)
- » Metrics on efficiency/quality gains from co-creation



From CUSTOMER PERSPECTIVE to
STAKEHOLDERS

- » Metrics on customer acquisition, retention and satisfaction
- » Metrics on the intensity and quality of the relationships with the partners in the ecosystem
- » Metrics on employees' satisfaction

From INTERNAL PERSPECTIVE to
MODULARITY AND AGILITY

- » Metrics on the robustness of processes
- » Metrics on supply chain integration (e.g. % hours worked on core business)
- » Metrics on reactivity to stress events

be kept low due to the technological developments. Providing the customized solutions that customers expect requires a sufficient degree of flexibility in the company's internal processes. Therefore, metrics are added to the EBBS that measure this flexibility (e.g. number of customized products produced, number of product variations that can be produced...).



DATA VALORIZATION IS A NEW SUCCESS FACTOR AND ADDS A NEW PERSPECTIVE

In many of today's successful businesses, data plays a crucial role. Many executives are currently putting a data strategy in place to make sure that they don't miss the boat, as they are increasingly aware of the fact that data is becoming a key weapon that can be used in many battles (e.g. optimization of internal processes, proactively developing offers for customers, predicting demand...). In order to monitor to what extent the implementation of this data strategy is on track, specific KPIs are added to the EBBS, in an additional "Data valorization" perspective. These metrics can measure both the usage and the reliability of information (e.g. number of personalized offers to customers, deviation between expected and actual demand...) and information storage and sharing (e.g. number of customers for which certain types of data are available, number of employees using data...)



FOCUS ON THE LONG-TERM, SUSTAINABLE COMPANY VALUE

While tracking the financial performance of a company is essential, and is an important driver of shareholder value, we see today that the sustainability of the financial performance also plays an important role. Therefore, appropriate accounting measures need to be tracked that take this sustainability into account (e.g. long-term profit objectives). A broader definition of sustainability that includes social and ethical sustainability can also support financial sustainability via its positive effect on customer acquisition and employee retention. Therefore, KPIs can be included that measure, in addition to accounting aspects, the company's environmental impact (e.g. paper consumption, carbon dioxide emission...) or the impact on people's lives (e.g. ethical rules infringement, labels obtained...)

Optimizing the scorecard's usage possibilities to maximize its impact


In the VUCA environment, the way the Balanced Scorecard is used should evolve in such a way that it allows for fast and accurate decision-making. In practice, the EBBS could be used as described below.

Depending on the person wishing to access information, not only the content of the EBBS will be customized, but also the way information is collected and presented and the possibilities given to use the information.

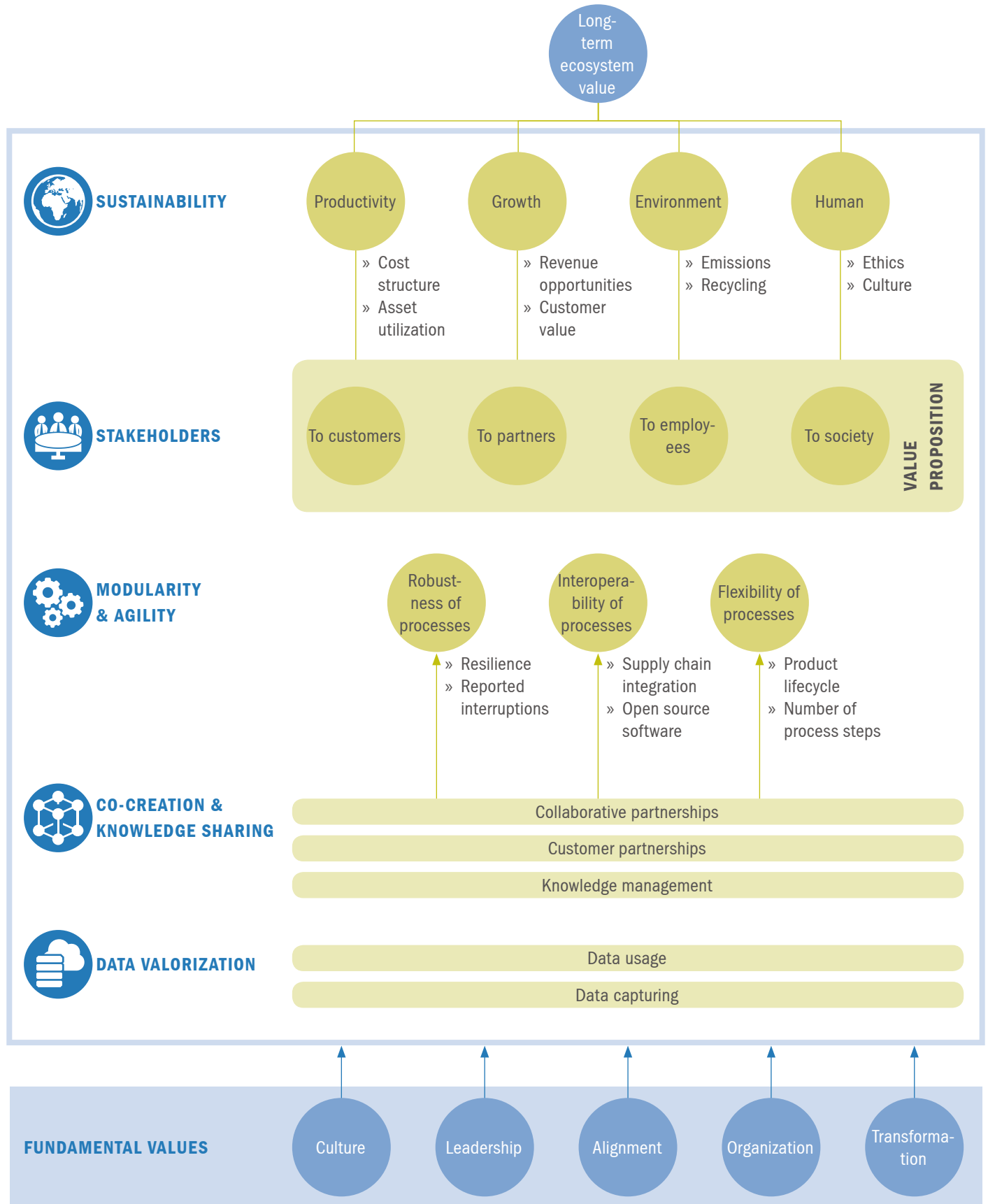
As an example, in a company, each BU manager would receive full access to all KPIs of his/her BU, but also to relevant global/other BUs' KPIs. By clicking on a KPI, the BU manager can be re-directed to the source of the data for more detail. He/she can also include in his/her version of the EBBS other indicators that might be interesting to follow. If he/she realizes one or several new indicators are in fact relevant for others, he/she can mark them as relevant for specific persons who can then decide, or be required, to include them in their version of the BSC. Each user of the BSC can also customize the way information is presented (e.g. bar chart, table, etc.) and can set up alerts in order to be informed immediately of certain developments in KPIs.

A new strategy map links the perspectives covered by the EBBS

All five perspectives included in the EBBS offer together a comprehensive framework for defining a company-specific strategy map that maximizes the long-term value of the company and its ecosystem.

Forerunner companies using the EBBS and its strategy map will be able to implement a more accurate strategy, allowing them to seize the opportunities emerging from the new ecosystem world and protect their company from shocks or gradual obsolescence. They will achieve the required agility to survive in the VUCA world, as well as the required digital behavior and, finally, the required connectivity. Not only will the EBBS be a useful tool for these companies, but as forerunners they will set the rules of the game, being the first ones to create links within the ecosystems. As such, the EBBS can be an important tool to acquire and sustain a clear competitive advantage. 

EBBS STRATEGY MAP



Publisher

ROLAND BERGER

STRATEGY CONSULTANTS SA/NV

Vorstlaan 100 boulevard du Souverain 100

B-1170 Brussels | Belgium

+32 2 661 03 00

marketing.brussels@rolandberger.com

www.rolandberger.be

The authors welcome your questions, comments and suggestions



MICHEL VLASSELAER

Partner

michel.vlasselaer@rolandberger.com

Links & likes

ORDER AND DOWNLOAD

www.think-act.com

STAY TUNED

www.twitter.com/RolandBerger

LIKE AND SHARE

www.facebook.com/RolandBergerStrategyConsultants



FLORIE BRISBOIS

Senior Consultant

florie.brisbois@rolandberger.com



FREDERICK VAN GYSEGEM, PhD

Senior Consultant

frederick.vangysegem@rolandberger.com

Tablet version

DOWNLOAD OUR THINK ACT APP

To read our latest editions on your tablet, search for "Roland Berger" in the iTunes App Store or at Google Play. Download the THINK ACT APP for free.



If you want to be removed from our mailing list feel free to contact the marketing department.

This publication has been prepared for general guidance only. The reader should not act according to any information provided in this publication without receiving specific professional advice. Roland Berger Strategy Consultants SA/NV shall not be liable for any damages resulting from any use of the information contained in the publication.