NEXT GEN DIGITAL

The company of the future? Providing digital solutions to customers and being digital itself. Both need to happen. With direction and at scale. Time to envision, transform and deliver.

Executive Summary

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We as business leaders are privileged. We transform our companies into digital enterprises. It sounds so nice. And it is so difficult. We invest a lot into it. Money, time, thinking. But how far have we really come when business reality hits the ground?

A ship needs no harbor. But the crew needs a direction. A convincing digital strategy considering corporate DNA and culture. A digital road map that is bold and flexible. A framework to exploit a customer-centered business approach and to deploy digital opportunities. A plan to provide digital capabilities to meet the expected demands. **We believe that digital transformation requires a comprehensive and holistic approach. Down to the ship cabins.**

Creativity, agility and swarm intelligence are just great. Of course we need to delegate to small and agile units with a maximum of freedom. Of course we need to encourage to thinking the unthinkable. Learn to fly by learning to fail. But can we rely on incidence only? Clear roles and a thorough operating model are needed. A tailored digital organization to support. Decision frameworks, lines of accountability and repeating methods in the transformation. **Digitization needs focus, structures and know-how on the spot to develop.**

We are not short on talking about digital. We are neither short of ideas. Great use cases, many seen elsewhere. Most of us will admit, though, that we need to improve the ability to execute on digital initiatives. That we need to have systems and processes in place to scale up. To learn from each other. To multiply outside of business areas or functional silos. To build up open gardens and ecosystems. **To become digital, we need to make it happen. Together at scale.**

1.
Envision

Define a comprehensive digital strategy

Digitization is the key disruption factor for most business models and underlying corporate DNAs as we know them today. Therefore, digitization needs to be an integral part of corporate strategies going forward and not a pure compilation of buzzwords. The corporate strategy needs to set the ambition level and the framework for dealing with opportunities and threats stemming from an increasingly digitized world.

A clear understanding of future market, customer and technology trends is essential. But it cannot be as simple as it sounds. Why else would it take numerous producers of industrial goods years to realize that selling components alone is not a robust business model for the long-term future? Why have many financial institutions pushed to fully digitize the customer interface and are now desperately trying to generate customer touch points for up- and cross-selling? So, what are the main issues traditional companies face as they move into the digital world?

First, in a digitized world, the key success factors and unique selling propositions changed and will further change. In many transactional business models, owning the customer interfacing platform has become significantly more important than actually providing the product or service. Therefore, a good corporate strategy also needs to provide an overall framework for operating in the digitized world. It needs to set priorities in the company's strategic targets. And it needs to outline the ambition level for market-oriented and company-internal digitization.

Second, we observe many companies having no digital strategy or treating it as a pure add-on component to be considered. But being mentioned and being there are two different things. Digital initiatives are usually scattered across the organization or, even worse, digitization is
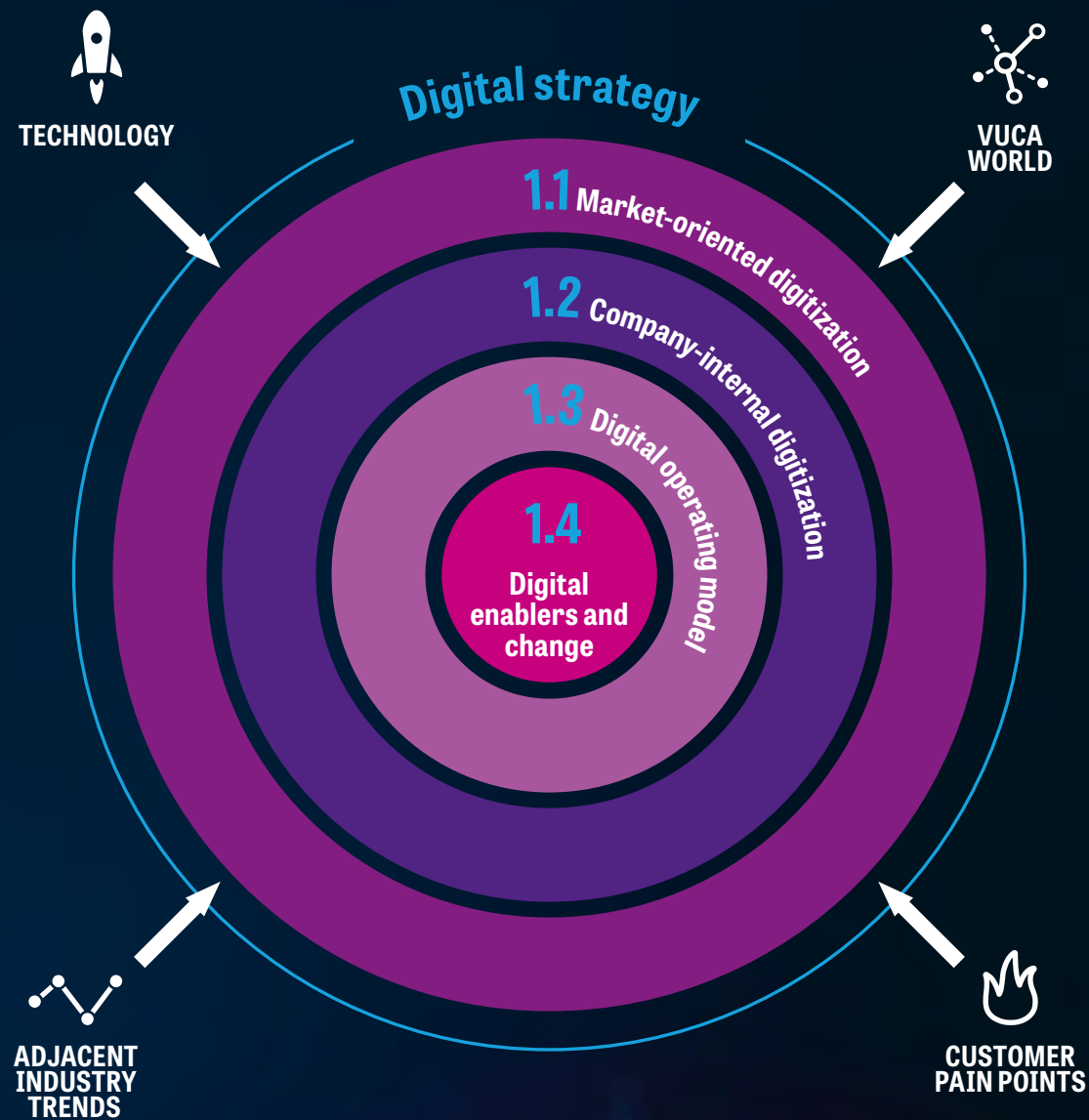
driven by the IT department as part of the IT strategy. No doubt even these organizations have lucky shots, but the answer should be a more holistic and structured approach that goes beyond the existing corporate strategy.

Third, most senior managers are in their 40s and 50s. Their success is primarily based on growing or improving traditional business models. Very often, this makes them overestimate the company's existing unique selling proposition and remain unaware of future trends. What you do not know or understand, you cannot make part of your thinking and decision-making. And vice versa. Therefore, before starting a corporate strategy process, we strongly recommend dedicated digital enabling journeys for senior management. Exchanging with digital leaders, start-ups and know-how providers not only is eye-opening in terms of trends and technology, it also adds significant value to the strategy process. Down the road, we observed that the network created during the discovery journeys also significantly supports the implementation of digital initiatives.

To overcome the issues and create a fresh view on the opportunities at hand, a sound and structured digital strategy process is needed. Our digital strategy framework consists of four dimensions, ensuring a holistic view on digitization.

Our Framework for Digital Strategy Development

Digital strategy

TECHNOLOGY

VUCA WORLD

1.1 Market-oriented digitization

1.2 Company-internal digitization

1.3 Digital operating model

1.4 Digital enablers and change

ADJACENT INDUSTRY TRENDS

CUSTOMER PAIN POINTS

1.1   Market-oriented digitization

This dimension covers the market and customer perspective and derives implications for the future business model set up. It includes the definition of the ambition level (e.g., first mover, fast follower), strategic targets (e.g., global vs. local market leadership) and prioritized corner-stones (e.g., omnichannel, platform business) to digitally enhance existing business models and create new digital ones.

In the very first phase of the digitization process, when defining their own digital goals, most companies find it difficult to formulate more than a few empty phrases and vague intentions. The lack of insight simply does not allow for a more concrete definition. Understanding your customer segments across different geographies and having a clear view on their world in five to ten years is the key prerequisite for actually defining the dimensions of your digital strategy. If you perform this analysis for a stationary food retailer with an international pres-ence, you will quickly realize that the customers' expectations toward, e.g., omnichannel differ significantly between Europe and China. In Europe alone, you will find huge differences in current expectations and future development speed. Having profound transparency on cus-tomer segments across key geographies sets the basis for understanding your customers' current pain points and future needs. Pairing these insights with existing and upcoming digital technologies, competitor and market developments as well as global megatrends establishes the necessary basis for defining meaningful and concrete strategic targets and setting the overall ambition level. However, in our VUCA world, flexibility is vital. Therefore, you must not be afraid to adapt your strategic priorities down the road as circumstances change.

In the strategy process it is crucial to make internal and external know-how available across functions and business areas. and to structure it. It is also important to always keep the holis-tic digitization roadmap in mind and not to focus on the technology roadmap alone.

YOU MUST NOT BE AFRAID TO ADAPT YOUR STRATEGIC PRIORITIES.

EXAMPLE 1:
DIGITIZATION STRATEGY – ENGINEERED PRODUCTS COMPANY

A world market leader in the segment of engineered products sought to define its digital strategy. Key complexity drivers were the large product portfolio and global market presence in more than 120 countries, with in part completely different customer preferences (basic vs. high-end functionalities), different routes to market (Joint Ventures in China and Russia, own vs. partner sales network) and completely controversial customers' digitization needs. Together with industry experts, the company created transparency on current issues and key trends in each of their target industries and key regions. With the transparency on the customers' world in five to ten years, the company quickly understood that their initial hypothesis on market-oriented digital initiatives would not fly.

> A more tailored approach was necessary to address existing customer pain points and future demands in particular industries.

Based on the generated insights, market-oriented digital initiatives were formulated, allocated to target industries as well as regions, and finally prioritized. Pilot regions with the highest market potential were selected (e.g., machine management platform for Russia, smart machine steering preventing failures in western Europe). Moreover, crucial enablers were identified, such as machine connectivity, for future business models (e.g. predictive maintenance). The prioritized market-oriented digitization initiatives gave clear guidance for projects while still leaving room for new ideas.

DIGITIZED CUSTOMER INTERFACE: E-COMMERCE, MARKETPLACE, VIRTUAL SALES AGENTS

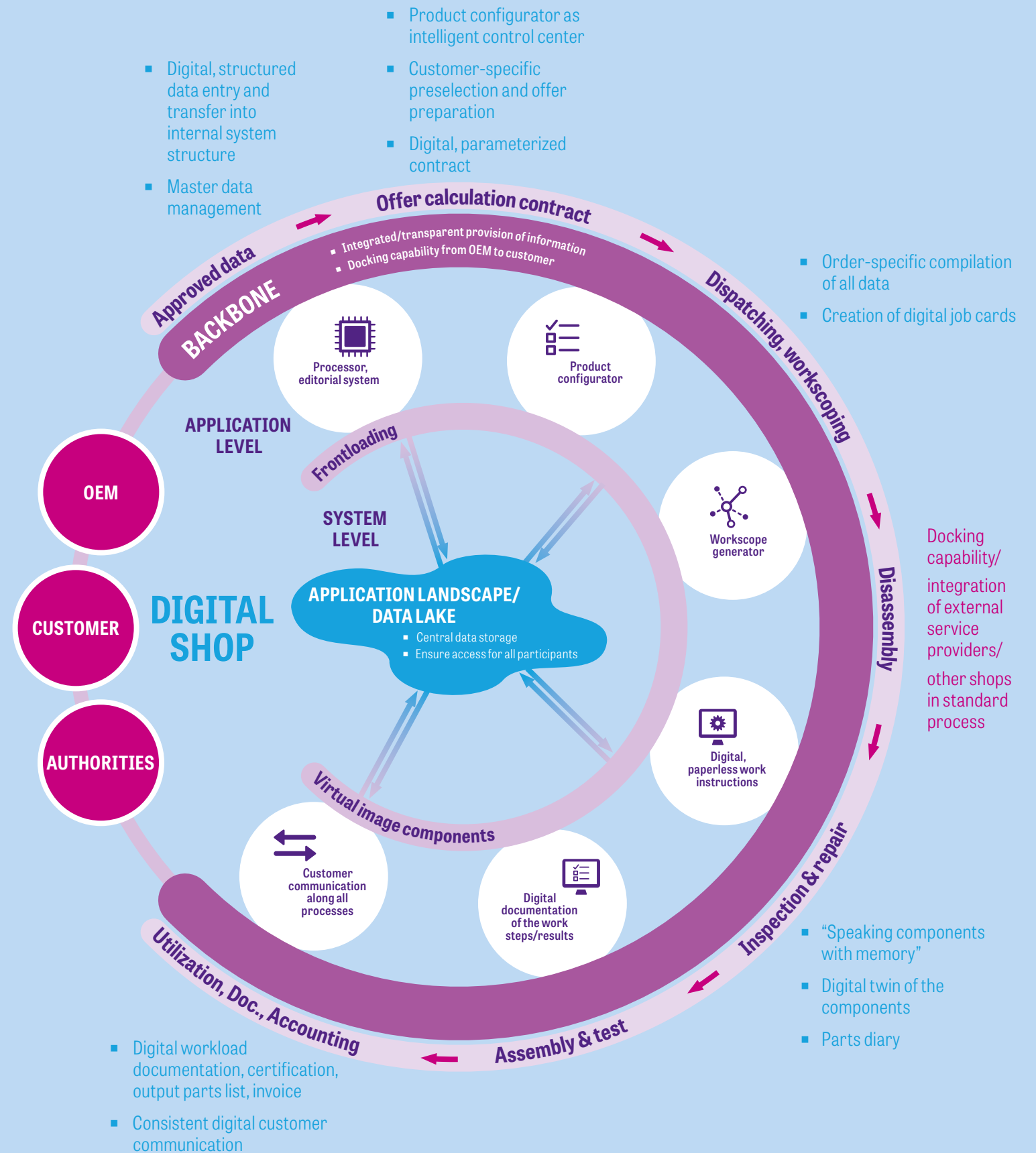DIGITIZED PRODUCTION: CONNECTED PRODUCTION NETWORK

EXAMPLE 2:
DIGITIZATION STRATEGY – MAINTENANCE AND REPAIR PROVIDER

The following illustration shows an example of the core questions to be answered and the outcome of the first strategic dimension for a global maintenance and repair provider.

DIGITIZATION STRATEGY: CORE ELEMENTS ...

- Trend screening (customers, technology, business models, vendors)
- Assessment maturity level
- Implications/interlocking with strategy
- Digital target picture and roadmap
- Requirements for target operating model
- Integration in planning and budget processes
- ...

- Digital, structured data entry and transfer into internal system structure
- Master data management

- Product configurator as intelligent control center
- Customer-specific preselection and offer preparation
- Digital, parameterized contract

- Order-specific compilation of all data
- Creation of digital job cards

Docking capability/ integration of external service providers/ other shops in standard process

- "Speaking components with memory"
- Digital twin of the components
- Parts diary

- Digital workload documentation, certification, output parts list, invoice
- Consistent digital customer communication

Diagram labels

Approved data · BACKBONE · Offer calculation contract · Dispatching, workscoping · Disassembly · Inspection & repair · Assembly & test · Utilization, Doc., Accounting · Virtual image components · Frontloading

OEM · CUSTOMER · AUTHORITIES

DIGITAL SHOP

APPLICATION LEVEL · SYSTEM LEVEL

- Integrated/transparent provision of information
- Docking capability from OEM to customer

APPLICATION LANDSCAPE/ DATA LAKE
- Central data storage
- Ensure access for all participants

Processor, editorial system · Product configurator · Workscope generator · Digital, paperless work instructions · Digital documentation of the work steps/results · Customer communication along all processes
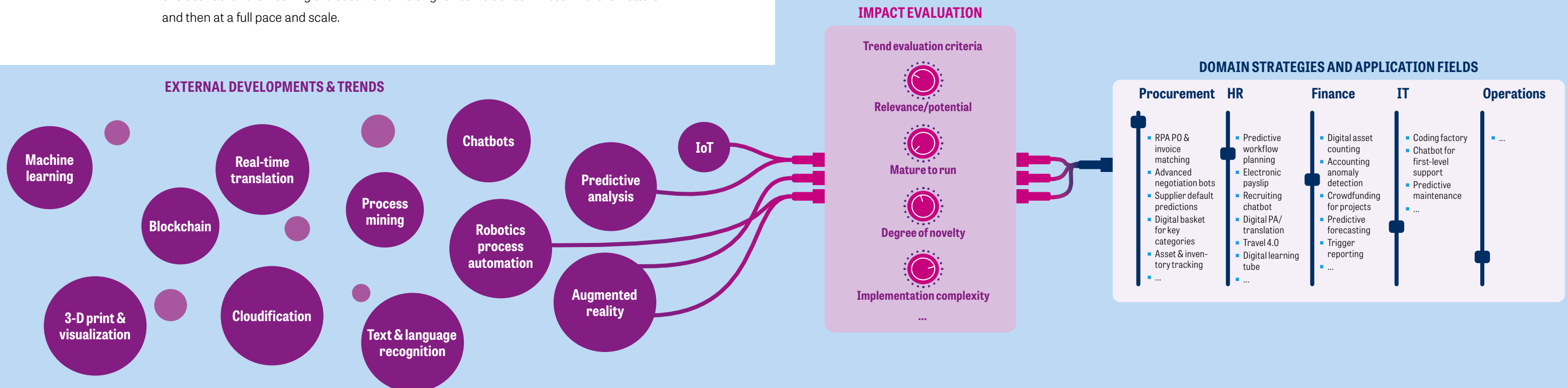
1.2   Company internal digitization

This dimension covers the digitization within the company and looks at existing processes and value steps. Obviously the two dimensions (market and internal) are interlinked and cannot be completely separated from each other, but we believe that more specific focus needs to be given to automate and digitize from within as well to become a truly digital company. This dimension therefore elaborates strategic targets and prioritized initiatives to automate and digitize internal processes and procedures as well as interfaces to, e.g., key suppliers and service providers.

Most companies have some sort of trend-scouting and screening activities in place to narrow the number of options. But the focus typically is on the technology rather than the potential application. And the focus is too much on what the others pretend and claim to do. We believe that a simple and robust set of criteria helps to run the assessment: looking at relevance/potential of the technology, maturity of the available solution landscape, degree of novelty to the organization or the assumed implementation complexity in the existing setup.

Even more problematic, the prioritization then lacks the clear and direct effect on resourcing and budgeting. Many still fall into the trap to then still allocate similar amounts to all options – just to not lose out on an opportunity. The opposite needs to happen. To digitally transform, we believe that much more framing and front-loading is required than in the past. Deliberate choices rather than boiling the ocean and waiting for coincidence. Invest where it matters – and then at a full pace and scale.

EXAMPLE:
DIGITAL TREND-IMPACT ASSESSMENT FOR SUPPORT-FUNCTION DOMAINS

The following illustration shows the "framing first" approach: Deliberately select and assess trends and technologies to go for within the internal key domains.

EXTERNAL DEVELOPMENTS & TRENDS

- Machine learning
- Real-time translation
- Chatbots
- IoT
- Blockchain
- Process mining
- Predictive analysis
- 3-D print & visualization
- Cloudification
- Robotics process automation
- Augmented reality
- Text & language recognition

IMPACT EVALUATION

Trend evaluation criteria
- Relevance/potential
- Mature to run
- Degree of novelty
- Implementation complexity
- ...

DOMAIN STRATEGIES AND APPLICATION FIELDS

Procurement	HR	Finance	IT	Operations
RPA PO & invoice matching	Predictive workflow planning	Digital asset counting	Coding factory	...
Advanced negotiation bots	Electronic payslip	Accounting anomaly detection	Chatbot for first-level support	
Supplier default predictions	Recruiting chatbot	Crowdfunding for projects	Predictive maintenance	
Digital basket for key categories	Digital PA/ translation	Predictive forecasting	...	
Asset & inventory tracking	Travel 4.0	Trigger reporting		
...	Digital learning tube	...		
	...			

Strategies to digitize internally do not stop at the company level. They need to be further broken down to specific domains and areas of responsibility to hit ground and to become more concrete. The specific target picture and underlying content needs to be domain or area specific, but methods and language used need to be consistent. The following examples depicts the key directional elements for the development toward a digital sales function in an industrial goods and services company. Selective big data initiatives improve digital customer journey; process mining enforces company-wide establishment.

DIGITAL CUSTOMER JOURNEY

EXAMPLE:
DIGITAL SALES EXCELLENCE

1.3   Digital operating model

Digitization actually requires more structure than you think. But just adding a chief digital officer role with dedicated budgets and resources will certainly not do the trick. From a more bundled center of excellence/joint resource pool organization to a more decentral business unit driven digital organization with some central coordination there is a multitude of potential setups. The digital organization must not be a foreign object in the organization, but accelerate and coordinate the digital transformation efforts. The golden rule is as always: as close to the business as possible, as central as needed to steer and coordinate. But with focus and sharing and scaling — not on templates and reporting. That requires high digital maturity of the entire management team to actually understand and persistently pursue the digital opportunities at hand. A central steering and coordination only ensures prioritization of topics and overall cohesion of the digital transformation program.

EXAMPLE:
# DO WE NEED A CHIEF DIGITAL OFFICER?

One of the key discussion points is the anchoring of a separate chief digital oder chief data officer role in the organization. The concrete application heavily depends on the underlying industry drivers and the corporate specifics and needs to be developed with caution. The following illustration shows some typical design application examples and required key considerations.
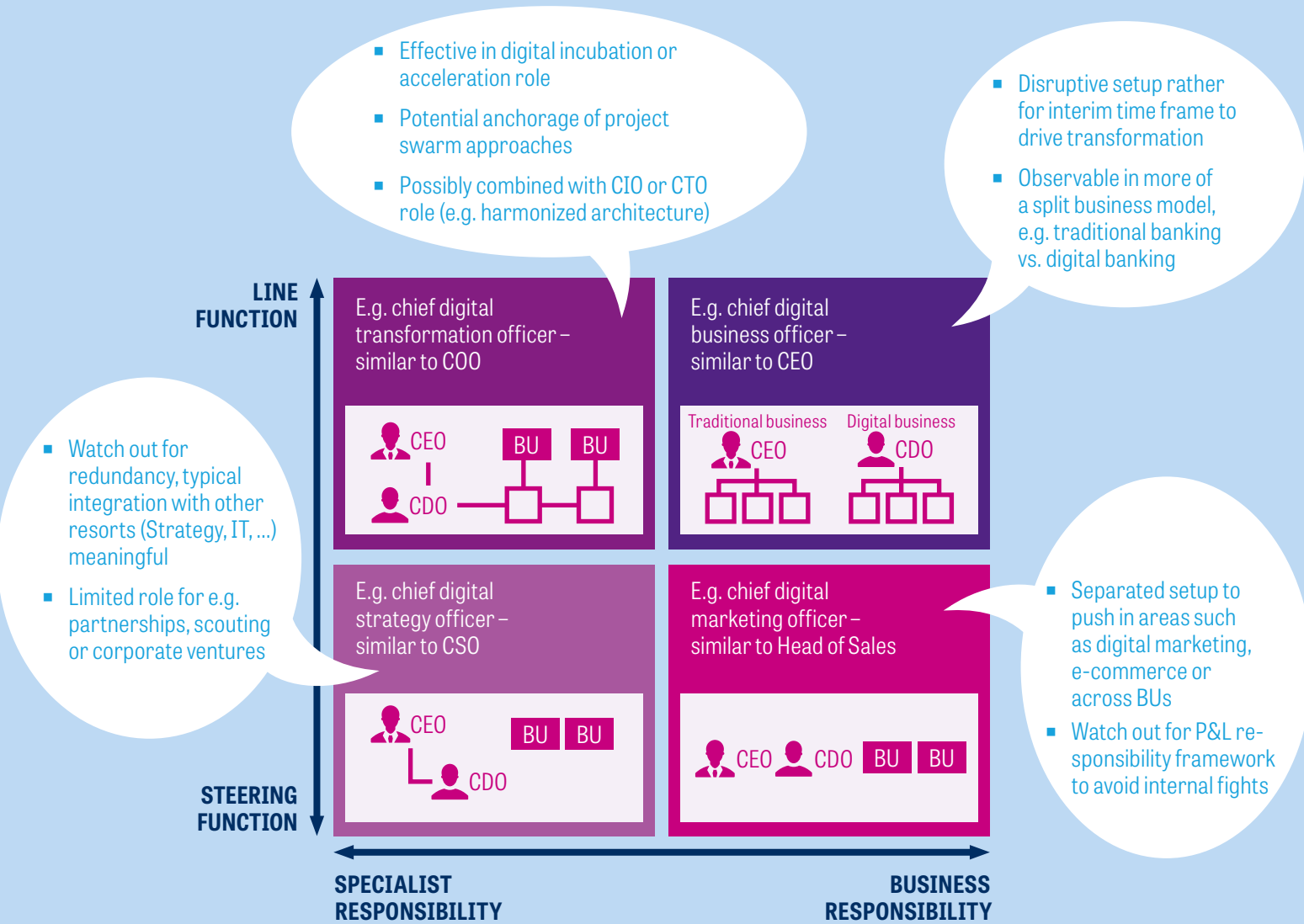
From our perspective four recommendations for an effective digital setup are vital:

- Bundle digital scouting and radar activities to focus efforts, but differentiate between products & services digitization and internal (process) digitization
- Do not delegate ownership to IT, but rather increase budget ownership and capabilities in support and business domain functions (e.g. small application and implementation oriented digi units for sales, supply chain, finance, HR, …)
- Provide test and lab environments for use cases, but with specific focus on scalability of solutions
- Create organizational responsibility for data management and data integration to effectively support digital initiatives

Therefore existing target operating models and structural setups need to change to utilize digital benefits in a more stringent and targeted way. One decisive area is for example the setup of a dedicated incubation and acceleration unit. The following illustration indicates the typical 4 archetypes (listening post, strategic investor, test laboratory and unicorn hunter) and one concrete setup for an industrial conglomerate. Hereby, the digital incubation or innovation unit sits within the Global Business Service organization. It hosts a critical mass (e.g. eight to 10 resources to reach a sufficient project pipeline) per selected core application and technology area (e.g. Analytics/AI). The incubation unit applies a stringent push-pull logic into domain functions and business units. "Push" to actively place and pitch available solutions to the internal customers. "Pull" to work on a project and mandate basis on a concrete solution development. Working mode is applying agile principles with UX tools, smaller sprints and cross-functional setups to realize high execution and implementation speed.
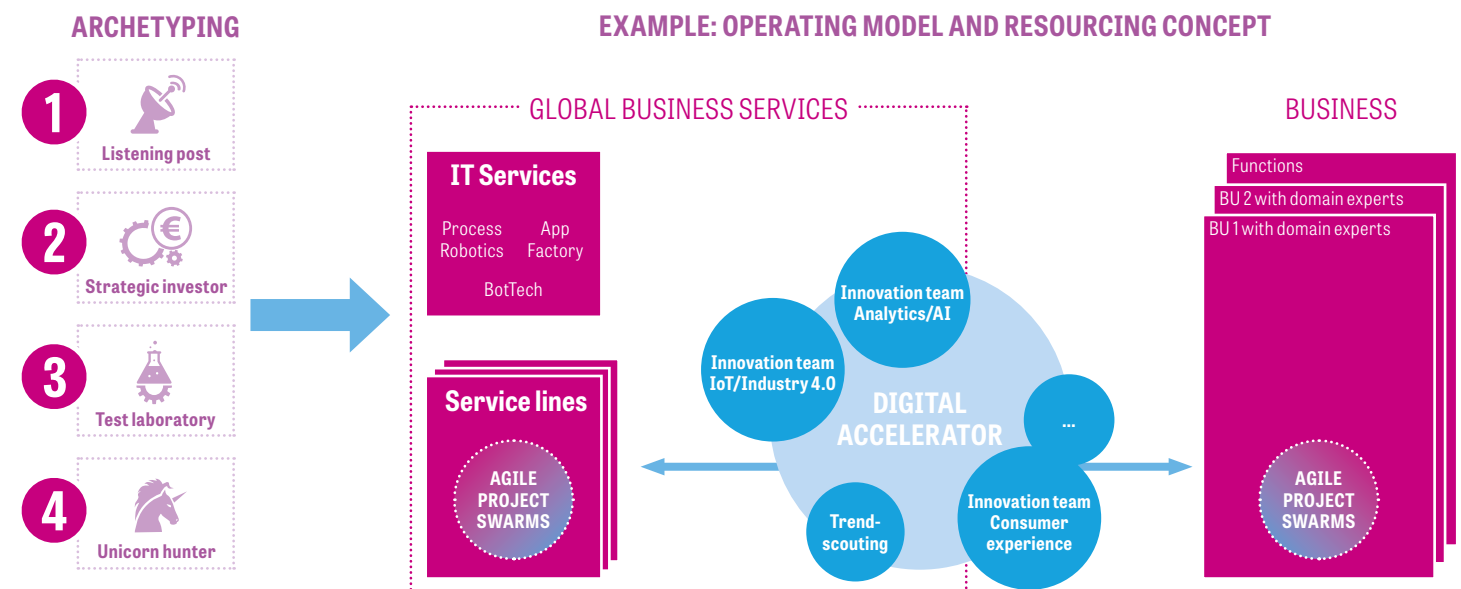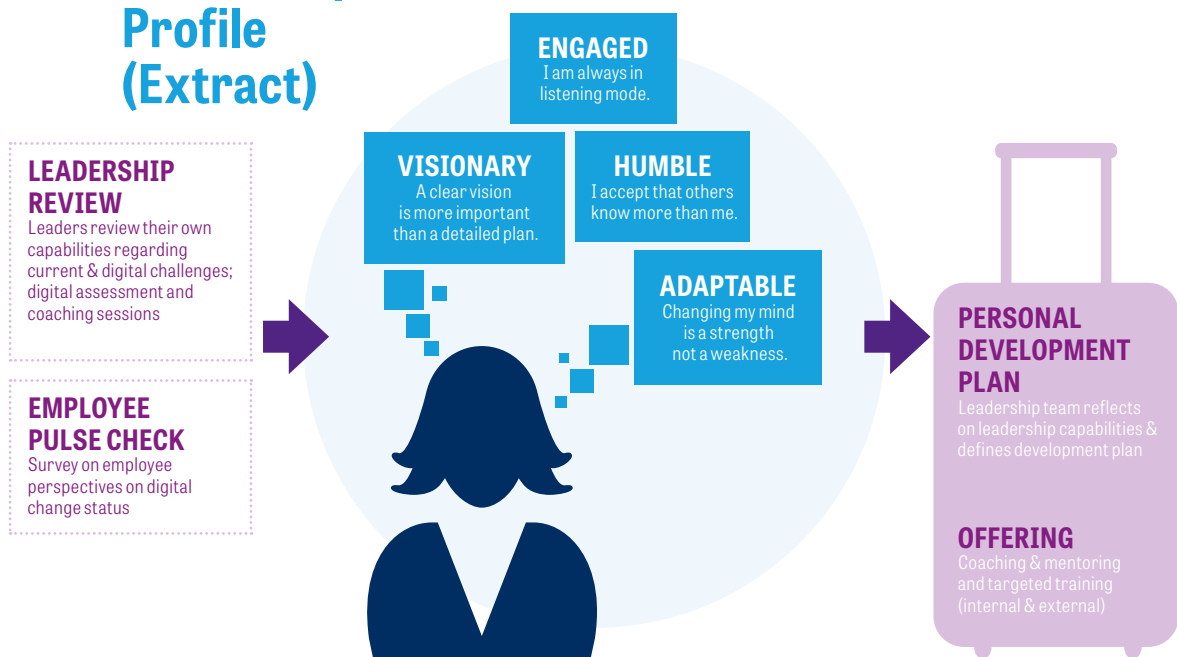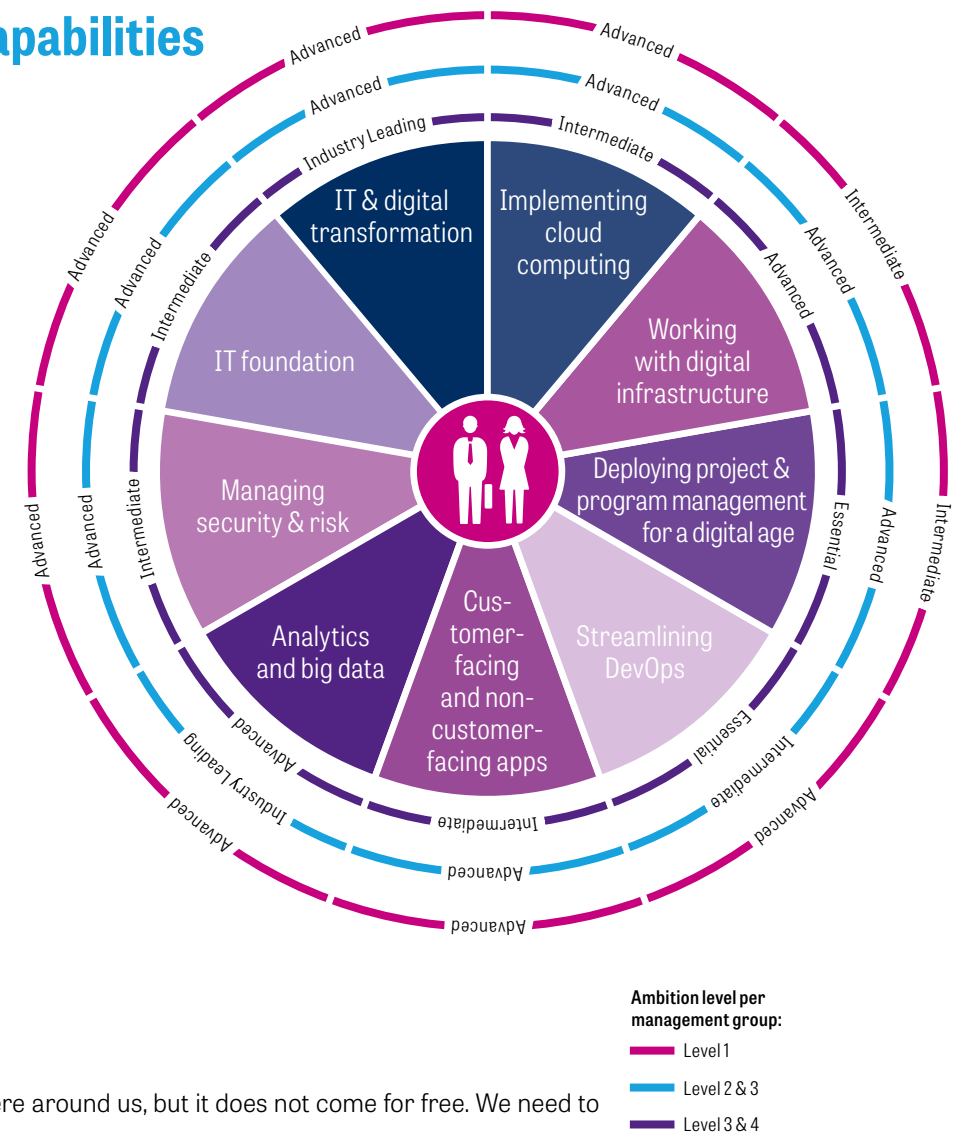
1.4   Digital enablers and change management

The enabler and change dimension is so fundamental, that it needs to be addressed right at the start in the strategy development process. It cannot be postponed. It cannot be delegated to selected key functions like IT, HR or corporate communications only to drive it. Corporate leaders need to create awareness and need to answer the "why" and the "how" for the future path toward digitization. Leaders need to play an active part to boost capability buildup and digital literacy for management and employees within the company. The instruments can be manifold and need to be adapted to fit company specifics. We believe especially two areas need to be covered: leadership and capabilities.

Leadership considerations need to go much deeper and need to involve more people than today. To only put top management to the spot is by far too simple and will not create enough traction within the organization. Especially middle management levels need to be activated and need to change their leadership habits in the new digital era. The following example shows a potential approach. At first, review and a pulse check build a basis and serve as a point of departure. The future target leadership profile is developed in a joint effort also involving younger talents from the organization. Contrasting the two, need for action is made transparent and individual development plans can be formulated using offerings developed in parallel.

Digital Leadership Profile (Extract)

LEADERSHIP REVIEW
Leaders review their own capabilities regarding current & digital challenges; digital assessment and coaching sessions

EMPLOYEE PULSE CHECK
Survey on employee perspectives on digital change status

ENGAGED
I am always in listening mode.

VISIONARY
A clear vision is more important than a detailed plan.

HUMBLE
I accept that others know more than me.

ADAPTABLE
Changing my mind is a strength not a weakness.

PERSONAL DEVELOPMENT PLAN
Leadership team reflects on leadership capabilities & defines development plan

OFFERING
Coaching & mentoring and targeted training (internal & external)

Digital Capabilities

Ambition level per management group:
— Level 1
— Level 2 & 3
— Level 3 & 4

Capabilities: Digitization is everywhere around us, but it does not come for free. We need to be prepared to invest into the buildup of needed capabilities. Not all for all – but tailored to specific needs and linked to the chosen strategic development paths. If customer service activities should be centered much more around the developed data foundation, then enough data science and data analytics capabilities need to available. If support functions all aim to heavily apply robotics process automation, then enough associates need to be trained and educated to scale up solutions – on the IT side and the functional domain side. Single pilots or only selected know-how experts will not serve the purpose. To make a difference, teams and capabilities need to be large enough. Prioritization is key – more than ever. The example above illustrates the approach using the IT domain – from digital target capabilities to requirements per management and seniority level. Obviously, content is different per domains or job family, but logic can be used consistently.

2.
Transform

Become digital to win digital

The transformation process needed to bring a business into the digital realm is not about inserting some digital elements to the existing business model. Your company culture cannot simply add digital, you need to become digital. Digitization has already disrupted numerous business models and the speed is accelerating even further.

The threat of digital disruption is real, but so are the opportunities offered by digitization. In our experience, it is very important to focus on these positive aspects by considering eight key factors for bringing digital capabilities down "to the shop floor."

2.1	Create a convincing story and anchor within leadership commitments
2.2	Actively manage ambidexterity
2.3	Let digital infiltrate your company
2.4	Digitize end-to-end processes rather than in functional silos
2.5	Transform IT to better support the digital journey
2.6	Use a dedicated speedboat approach for pursuing moon shots
2.7	Actively manage people transformation and footprint shifts
2.8	Establish a continuous digitization process

2.1   Create a convincing story and anchor within leadership commitments

It is crucial to create a relevant and convincing story on the pressing reasons to initiate change. The path to this goal must be described in the same way as the vision of a future digital corporate culture.

EXAMPLE:
CONSUMER GOODS PRODUCER – DIGITAL CHANGE MANAGEMENT PROGRAM

A leading consumer goods producer initiated a digital cultural change management program. The company defined the change story and initiated a strongly inclusive program to elaborate their cultural values for the digital age.

> With broad involvement of employees across the globe, they derived "10 commitments."

Stronger entrepreneurship, agility and most important a fail-forward culture were some of the new cornerstones. The entire management team, down to middle management, performed a self-assessment for each commitment. Based on the results, guidance was given to close the gaps. This assessment also became part of the bonus-relevant annual review. Employees were asked to assess their superiors according to the defined commitments. Despite a highly dedicated and professional change management program, it took more than a year to reach satisfactory results.

2.2 Actively manage ambidexterity

In addition to properly communicating the transformation process, there is another decisive challenge: This consists of the combination of two parallel strategies that also seem to contradict each other. After all, your current business models are delivering returns and most probably they will continue in the tmid-term. So the company culture and governance model need to support the necessary ambidexterity: continuing to efficiently perform evolving existing business on the one hand and become more flexible to find new revolutionary business models on the other.

Take the automotive industry as an example: Increasing efficiency and lower emissions of combustion engines are crucial, so is increasing efficiency in the current production setup. Without cash generation from traditional business models, e-mobility, autonomous driving, scaling of sharing models that undoubtedly will be the future of mobility cannot be funded.

Achieving and measuring success in these new business models are different. E-mobility is not a cash cow for most OEMs by now, autonomous driving made progress but the breakthrough will take a few more years.

Organizations therefore have to learn to deal with ambidexterity, foster the key success factors of both worlds through proper governance and, in the end, push new business models to cannibalize existing ones.
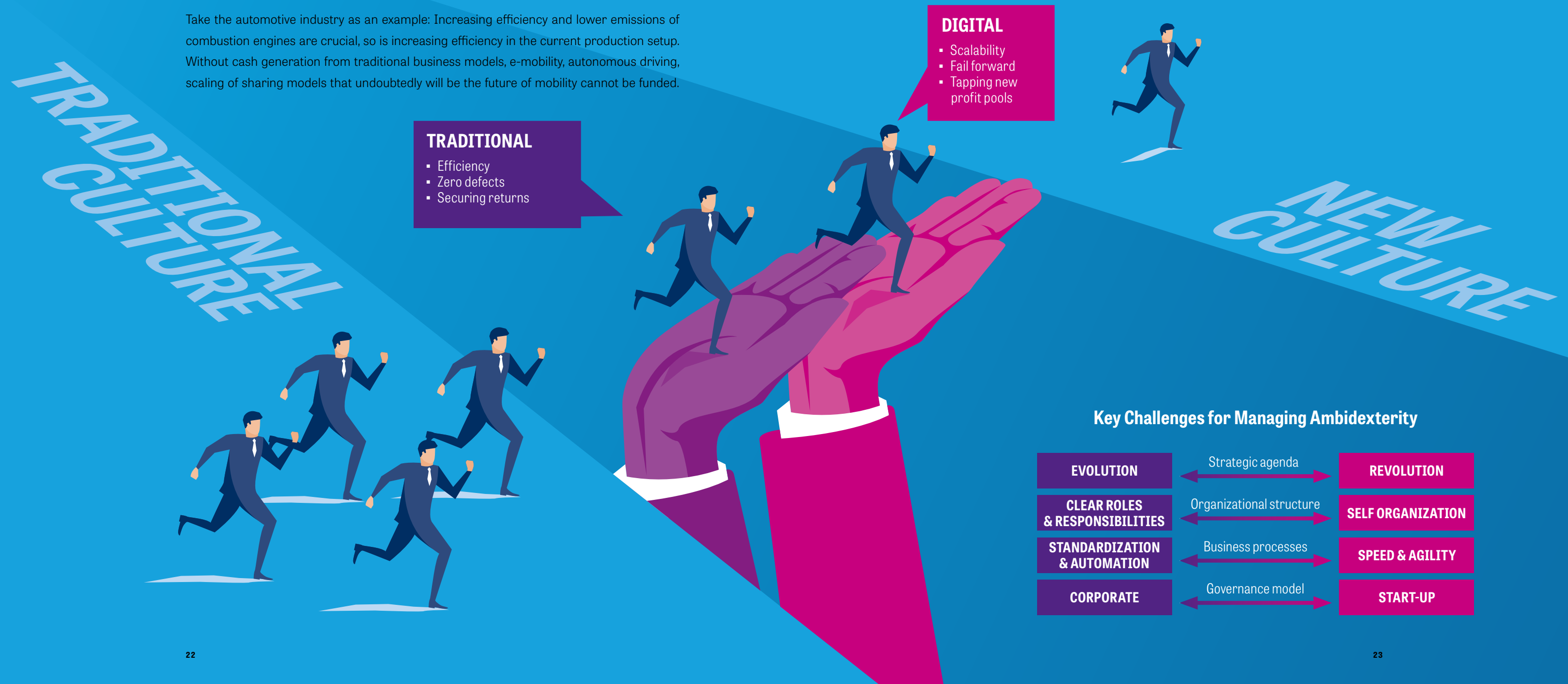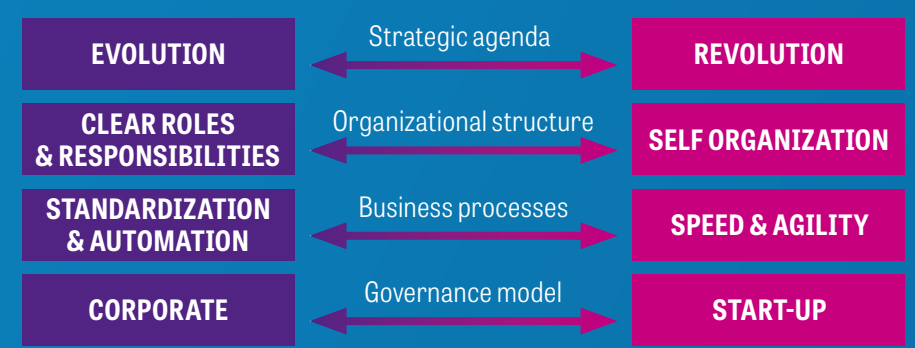
TRADITIONAL

- Efficiency
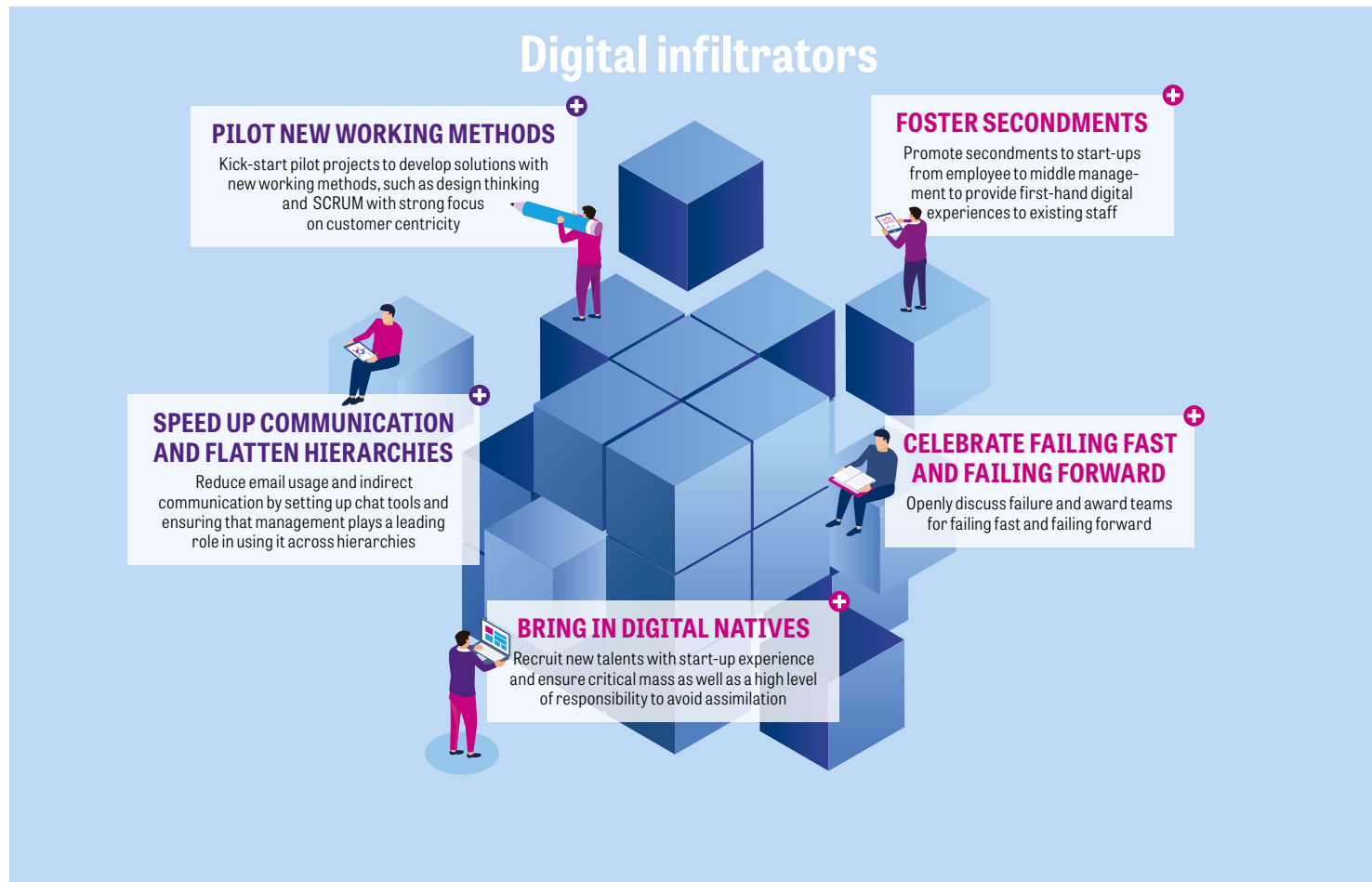- Zero defects
- Securing returns

DIGITAL

- Scalability
- Fail forward
- Tapping new profit pools

TRADITIONAL CULTURE

NEW CULTURE

Key Challenges for Managing Ambidexterity

EVOLUTION	Strategic agenda	REVOLUTION
CLEAR ROLES & RESPONSIBILITIES	Organizational structure	SELF ORGANIZATION
STANDARDIZATION & AUTOMATION	Business processes	SPEED & AGILITY
CORPORATE	Governance model	START-UP

2.3   Let digital infiltrate your company

To create a real digital culture, digital needs to infiltrate your current one. Doing things differently starts to change how your team thinks and establishes a digital spirit. The following tactics create significant benefit:

Digital infiltrators

PILOT NEW WORKING METHODS
Kick-start pilot projects to develop solutions with new working methods, such as design thinking and SCRUM with strong focus on customer centricity

FOSTER SECONDMENTS
Promote secondments to start-ups from employee to middle management to provide first-hand digital experiences to existing staff

SPEED UP COMMUNICATION AND FLATTEN HIERARCHIES
Reduce email usage and indirect communication by setting up chat tools and ensuring that management plays a leading role in using it across hierarchies

CELEBRATE FAILING FAST AND FAILING FORWARD
Openly discuss failure and award teams for failing fast and failing forward

BRING IN DIGITAL NATIVES
Recruit new talents with start-up experience and ensure critical mass as well as a high level of responsibility to avoid assimilation

Which combination of digital infiltrators works best for your company depends on existing weak points and your company culture. In our experience, a strong and persistent push is necessary to shape a company towards change.

CASE STUDY:
AUTOMOTIVE OEM

As part of an overall digital change management program, a premium automotive OEM performed a top-management "digital literacy" project.

The aim was to ensure first-hand digital learning and employable working experiences for the management team. Several international and cross-functional teams of 12 to 14 managers were created. The digital literacy project consisted of three phases:

1.   **Experience:** Exchange with digital native companies and start-ups in global digital hubs
2.   **Apply:** Solve a defined challenge (business model or solution) with design thinking methodology
3.   **Reflect:** Present solutions and failures in a global convention with a focus on celebrating best successes and best failures
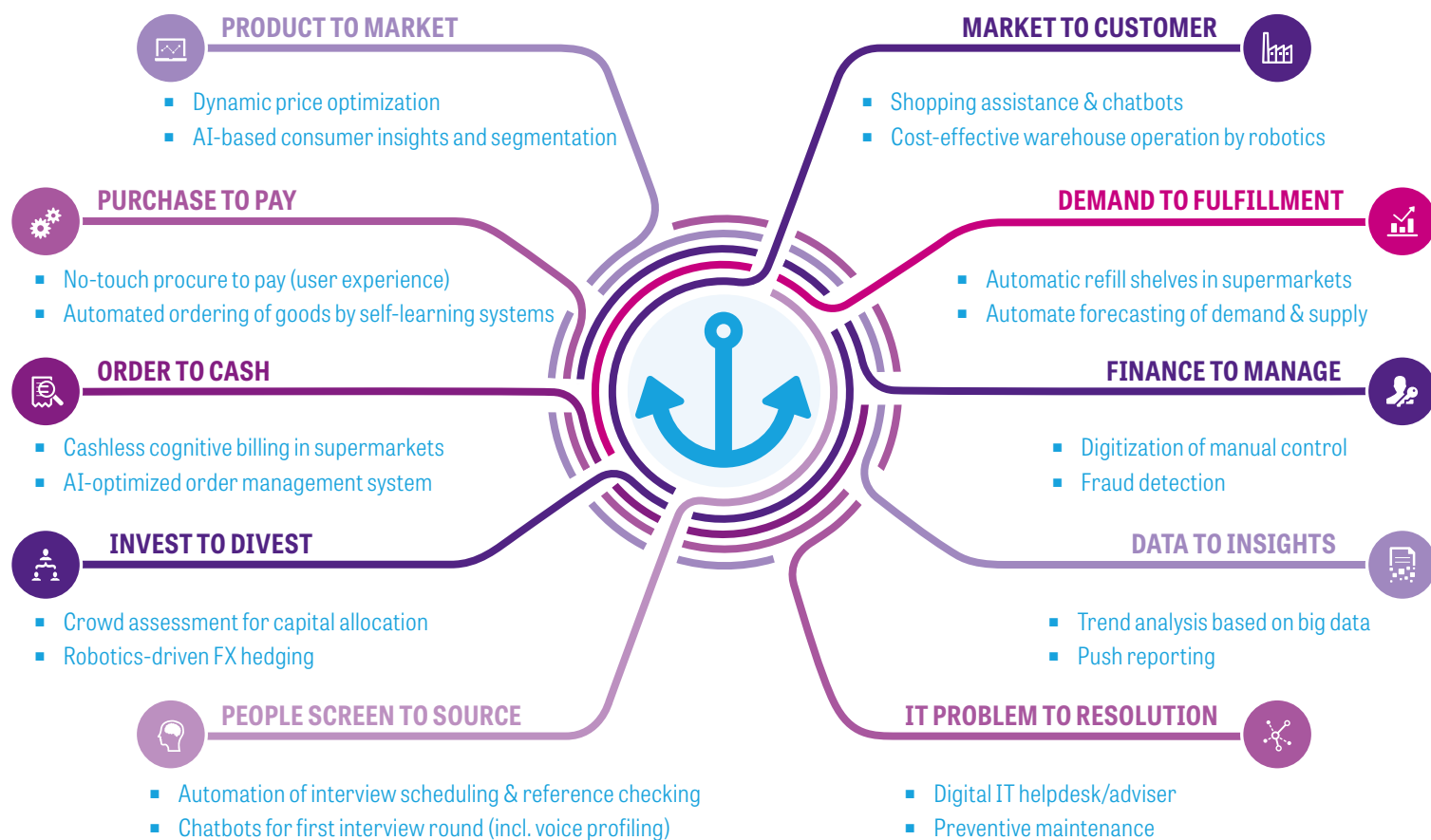
Several minimum viable solutions from the design thinking sessions were selected for further maturation. Most importantly, the management team experienced a different view of customers, technology and business. Many managers have incorporated the new working methods in to their everyday work routine. After the "digital literacy" program, digital was no longer a buzzword but rather a tangible way of thinking and working.
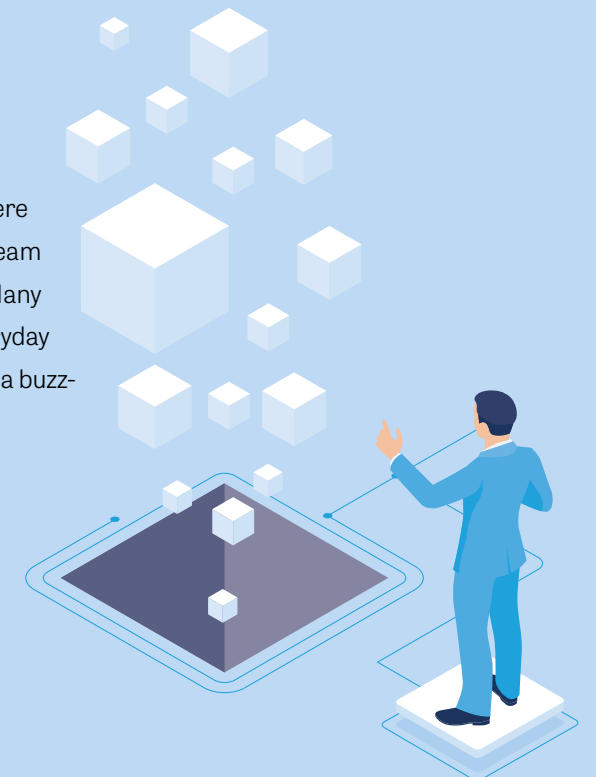
2.4   Digitize end-to-end processes rather than in functional silos

How are we used and trained to optimize? Well, in most cases we operate in a given structure. And this structure leads to optimization in wall-to-wall logic. Some have already started to change. And the digital journey requires exactly that. To start from the customer or the user. And then to digitize along the process chain or experience journey that is attached to it. So companies need to staff digital initiatives as projects with representatives from the various domains and functions to look for the cross-functional optimum. Governance can still be decided at a later stage once the project has successfully delivered the solution to be governed from then on. The following graphic includes a digital agenda following the company's core process chains – specific and tailored to the respective requirements of the individual steps.
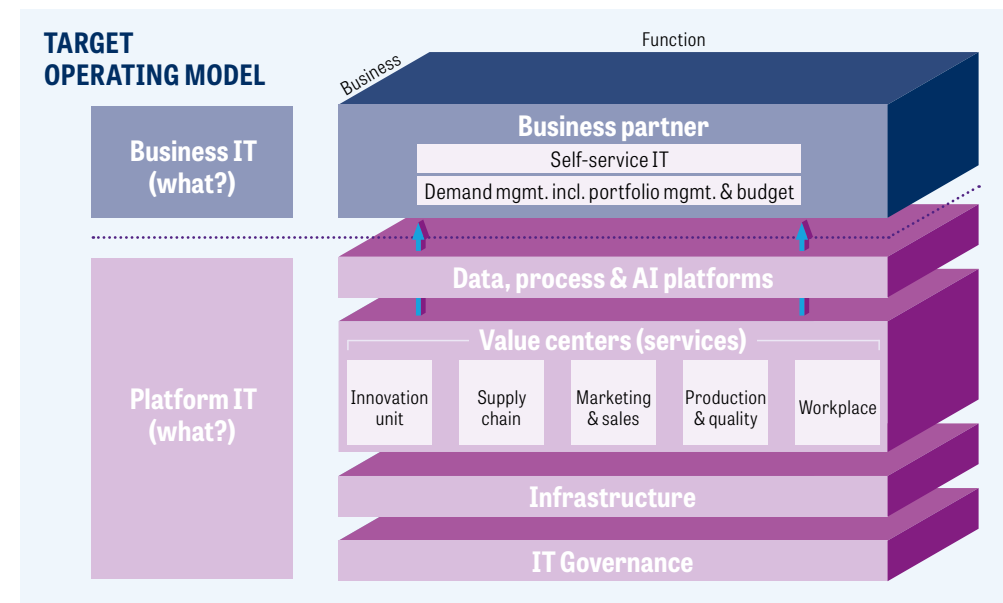
Example: End-to-end process digitization

PRODUCT TO MARKET
- Dynamic price optimization
- AI-based consumer insights and segmentation

PURCHASE TO PAY
- No-touch procure to pay (user experience)
- Automated ordering of goods by self-learning systems

ORDER TO CASH
- Cashless cognitive billing in supermarkets
- AI-optimized order management system

INVEST TO DIVEST
- Crowd assessment for capital allocation
- Robotics-driven FX hedging

PEOPLE SCREEN TO SOURCE
- Automation of interview scheduling & reference checking
- Chatbots for first interview round (incl. voice profiling)

MARKET TO CUSTOMER
- Shopping assistance & chatbots
- Cost-effective warehouse operation by robotics

DEMAND TO FULFILLMENT
- Automatic refill shelves in supermarkets
- Automate forecasting of demand & supply

FINANCE TO MANAGE
- Digitization of manual control
- Fraud detection

DATA TO INSIGHTS
- Trend analysis based on big data
- Push reporting

IT PROBLEM TO RESOLUTION
- Digital IT helpdesk/adviser
- Preventive maintenance

2.5   Transform IT to better support the digital journey

Digitization cannot and must not be pushed to IT. IT is an enabler, but cannot drive it all by itself. Decentralization of IT is also not the solution. What is needed is a new approach to work more closely and better together with business units and domains. IT in particular needs a new framework for improving the management of demand-and-build activities from the business. And IT needs also a stronger business partner organization – but fully embedded in the business with flexibility if and when needed. In the new normal, IT needs to provide three core elements:

- A robust and comprehensive IT governance out of one hand and including new relevant core topics, such as data security
- A provision of capabilities and resources to digitize in each and every domain applying a value center approach (e.g. for supply chain, sales, production, …) and following business demands
- A flexible and platform-based enterprise and application architecture to deploy and scale up digital use cases

TARGET OPERATING MODEL

Business   Function

Business IT (what?)

Business partner
Self-service IT
Demand mgmt. incl. portfolio mgmt. & budget

Platform IT (what?)

Data, process & AI platforms

Value centers (services)
| Innovation unit | Supply chain | Marketing & sales | Production & quality | Workplace |

Infrastructure

IT Governance

2.6   Use a dedicated speedboat approach for pursuing moon shots

A further key question is whether a corporate speedboat is beneficial. In past years, many have not delivered the promised results, while some were extremely successful.

The answer to this question is provided by your corporate and digital strategy: Are you aiming at a moon shot – that is, to be the first and try to disrupt your industry? Or are you instead aiming at quickly following digital trends? The ambition level outlined in your digital strategy determines the necessity for and setup of a dedicated speedboat unit.
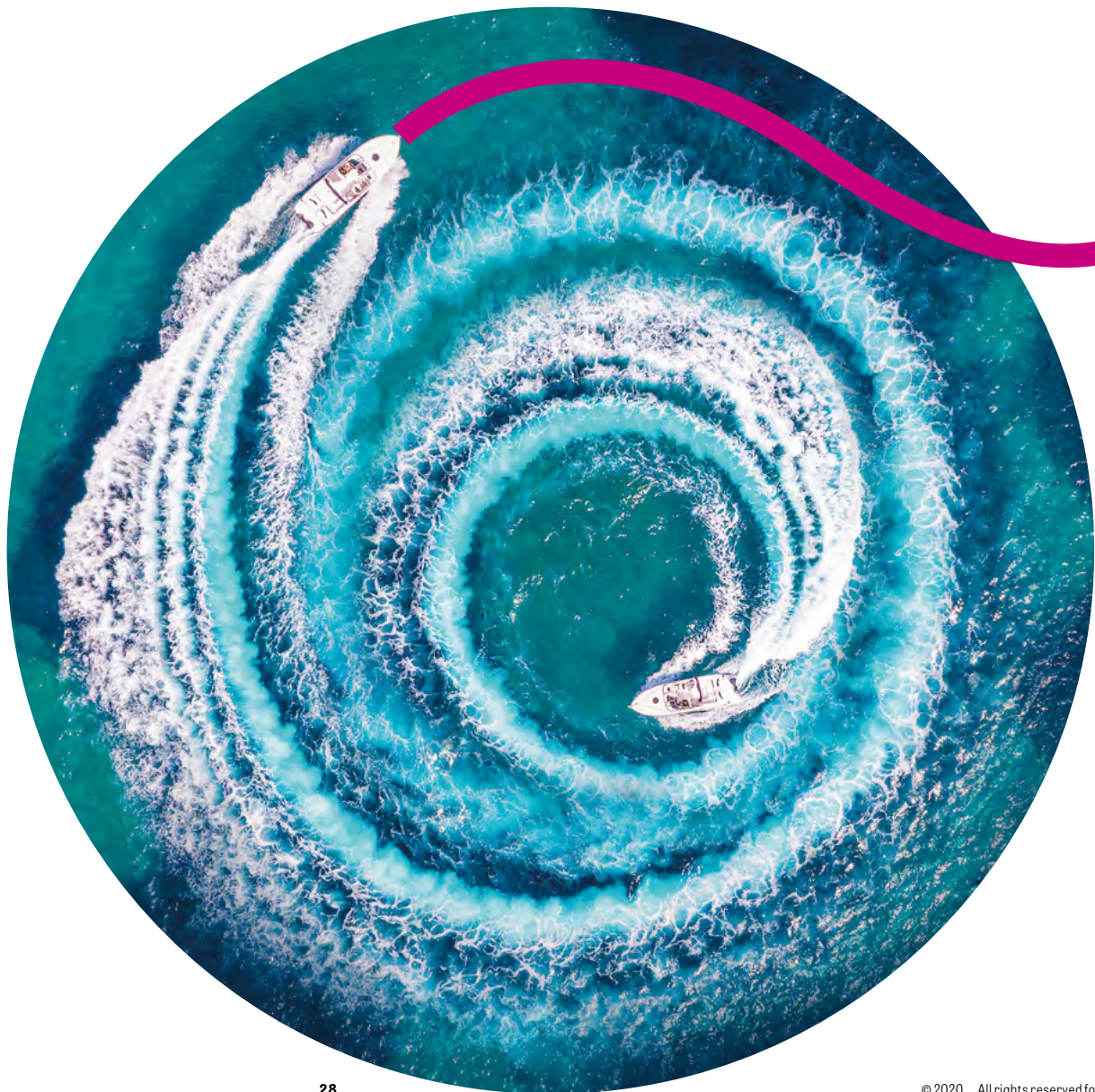
Speedboats are separate organizational units, potentially even reporting to a separate board member. They enable agile project swarms, working in their own ecosystem for a limited time. The core team of the speedboat is lean and provides for external network (e.g. freelancers, start-ups, etc.), working methods and infrastructure. Separated from the mothership, speedboats have their own governance system, a significantly more agile and failure-tolerant culture and therefore act as a magnet for external talents and start-ups. For the mothership they act as a cultural spearhead. Facilitating project swarms in a speedboat with team members from the core organization is a fast-track change-management program that radiates through the entire organization. In addition, speedboats can help you to compensate for geographical disadvantages caused by the location of your company headquarters. Typically, you would locate them in vibrant metropoles that provide the digital and start-up network you require.

Which and how far topics are developed in a speedboat, depends strongly on the company's current capabilities in the core organization and the topic developed. Typically, we advise allocating revolutionary topics to the speedboat and also develop the seeding and maturation phase there. If the setup is supportive, the go-to-market can be performed in the core organization or can be done from the speedboat. However, no matter which of the many variants you choose, it is crucial that it is done in a holistic and consistent manner.

ARE YOU AIMING AT A MOON SHOT?
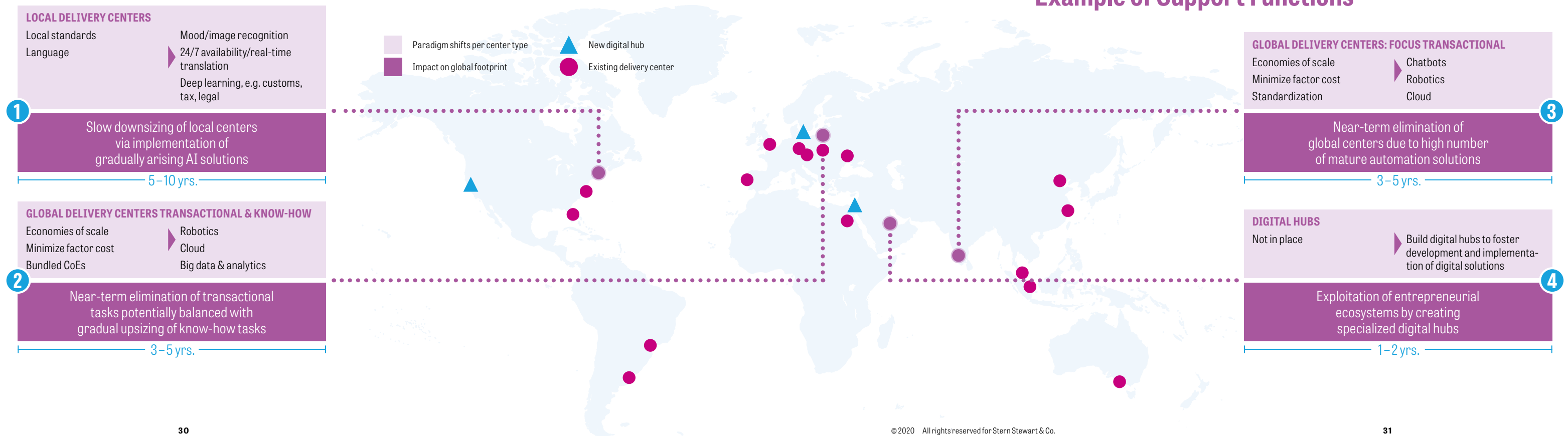## OR ARE YOU AIMING AT DIGITAL TRENDS?

2.7   Actively manage people transformation and footprint shifts

The people dimension in transforming our companies into digital enterprises very often gets overlooked or understated in importance. This is especially relevant for the majority of companies with a strong historical footprint in Germany. Three areas need to be balanced and thoroughly managed:

- Recruit and build up know-how and digital capabilities to support in the transformation and to operate the company in the digital era. This includes hiring in critical competence areas and future job families (e.g. software development, application design, data science, …) as well as building up an open garden network to pull in flexible resources if and when needed.
- Manage the resource ramp-down in all areas where digital solutions replace the human factor. This has been happening both in transactional as well as in know-how and rule-based human activities and will continue into the future. The more we scale up solutions, the higher the impact and need to manage the transition. An open and fact-oriented process based on mutual trust especially with the German codetermination committees is needed to drive it forward.

- Enable and develop parts of the existing workforce to master the transition into the digital and automated enterprise and shift resources to new (e.g. data-driven) processes or services that become possible in the digital transformation
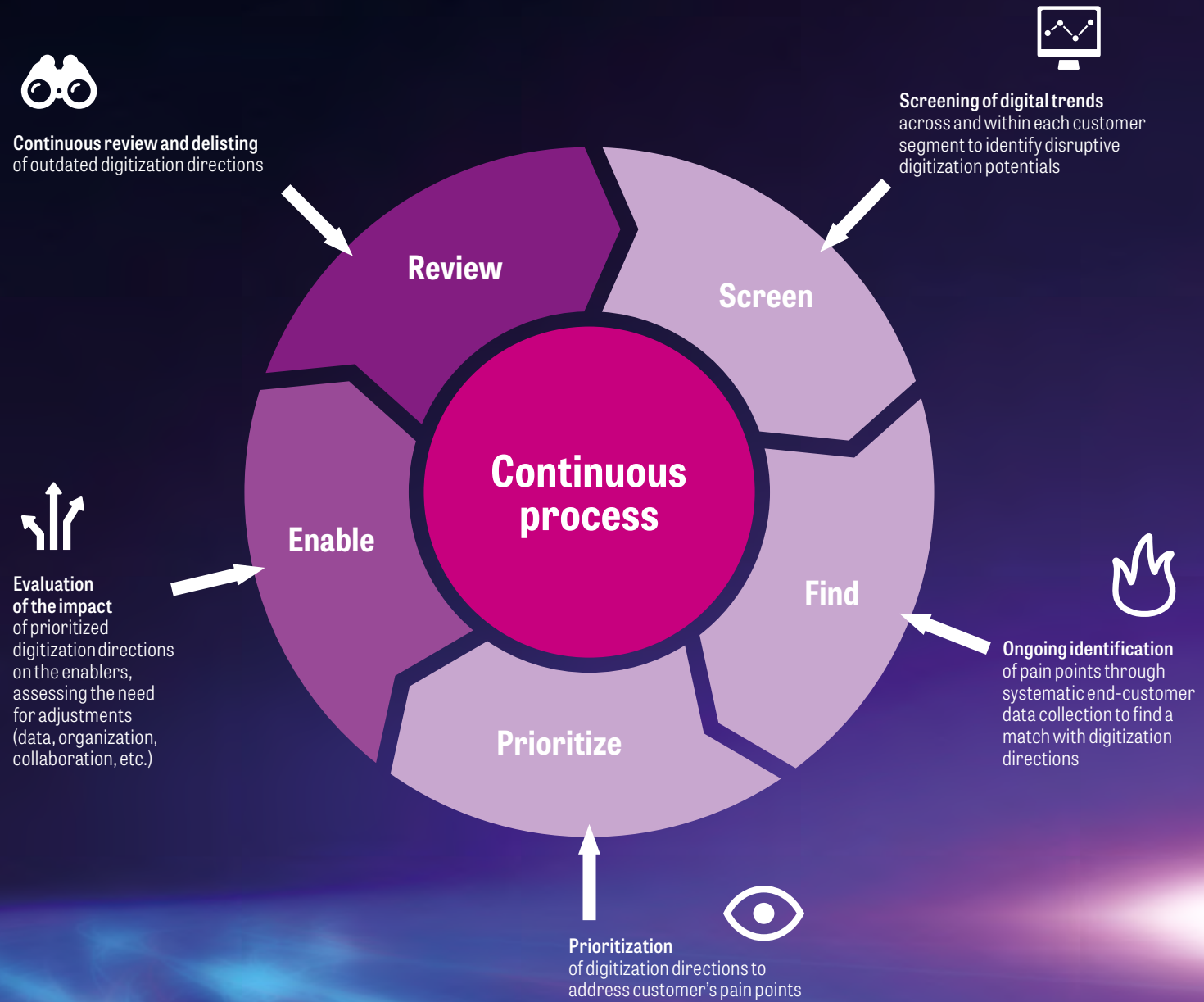
Major footprint shifts will continue to happen. With different directions and with different focus. Digitization will create a natural counter movement to many optimization initiatives from the past. Back then, activities were frequently transferred from high-cost locations to low-cost locations due to disadvantages with regard to factor costs. A common consequence: the loss of customer proximity, quality and agility. Through digitization these shifts can either be "skipped" or service provision can be shifted back as part of reshoring projects. In some industries, this has already been successfully applied. Not only reputation risks due to poor working conditions in low-wage countries are circumvented, but staffing requirements, storage costs and long transport distances are also reduced.

Assessing the Impact of Digitization on the Global Footprint – Example of Support Functions

LOCAL DELIVERY CENTERS

Local standards
Language
▶ Mood/image recognition
24/7 availability/real-time translation
Deep learning, e.g. customs, tax, legal

Paradigm shifts per center type
Impact on global footprint
▲ New digital hub
● Existing delivery center

1 Slow downsizing of local centers via implementation of gradually arising AI solutions
⊢ 5 – 10 yrs. ⊣

GLOBAL DELIVERY CENTERS TRANSACTIONAL & KNOW-HOW

Economies of scale
Minimize factor cost
Bundled CoEs
▶ Robotics
Cloud
Big data & analytics

2 Near-term elimination of transactional tasks potentially balanced with gradual upsizing of know-how tasks
⊢ 3 – 5 yrs. ⊣

GLOBAL DELIVERY CENTERS: FOCUS TRANSACTIONAL

Economies of scale
Minimize factor cost
Standardization
▶ Chatbots
Robotics
Cloud

3 Near-term elimination of global centers due to high number of mature automation solutions
⊢ 3 – 5 yrs. ⊣

DIGITAL HUBS

Not in place
▶ Build digital hubs to foster development and implementation of digital solutions

4 Exploitation of entrepreneurial ecosystems by creating specialized digital hubs
⊢ 1 – 2 yrs. ⊣

Continuous review and delisting of outdated digitization directions

Screening of digital trends across and within each customer segment to identify disruptive digitization potentials

2.8 Establish a continuous digitization process

Defining the digitization initiatives once in a digital strategy roadmap does not do the job. Changing technology, industry and customer trends make it necessary to implement a continuous digitization process in the company.

Clearly assigned responsibilities for, e.g., screening technology as well as customer and market trends are necessary for the continuous digitization process to work. Tech Radars help you to identify technology suitable for your business. Staying close to your customers and identifying their current and future needs form the basis for finding profitable use cases and new business models for the technology.

Review

Screen

Continuous process

Enable

Find

Prioritize

Evaluation of the impact of prioritized digitization directions on the enablers, assessing the need for adjustments (data, organization, collaboration, etc.)

Ongoing identification of pain points through systematic end-customer data collection to find a match with digitization directions

Prioritization of digitization directions to address customer's pain points

3.
Deliver

————————

*Deploy and scale up
to make a difference*

Innovation in the digital age changed significantly. For many years, incumbents primarily focused on evolutionary innovation. R&D departments drove the upgrades to the next product generation. They brought slight improvements in convenience, energy usage or design.

"How disruptive an idea is depends on how big you think." This apt phrase wonderfully summarizes what distinguishes today's innovation from the state just described. Today, evolutionary innovation in many cases is merely a hygiene factor. For market-winning, growth-fueling innovation, many companies have to enter the space of revolutionary innovation.

For most incumbents, this is not their home turf. To actually deliver market-winning disruption, incumbents need to reinvent themselves. From our experience, companies should consider six key learnings on successfully delivering new digital solutions.

3.1   Establish radical customer centricity

The bait needs to taste the fish, not the fisherman. Companies are so in love with their products and services that they forget to make sure the customer is too. Make sure to include customers from the very beginning and focus on solving their pain points. From our experience, business models (regarding the external customer for digital service offerings) and internal (regarding the internal customer for process digitization) innovation that started with, e.g., design thinking methods have a significantly higher success rate.

3.2   Revolution does not mean adding a bit more evolution

Under revolutionary innovation, we understand a complete rethinking of existing solutions or a development of an up to now nonexisting solution or business model. Further, more revolutionary innovation projects carry high risk and most often require external know-how.

3.3   Define your risk appetite and return demands

New business models are not new product generations. Countless cases of failed new business-model approaches make it necessary to define your risk appetite – clearly and upfront. How much are you ready to invest per case? What is the portfolio diversification you require? What is the return you want?

EXAMPLE:
RISK APPETITE AND RETURN DEMANDS – CASE STUDY – ENGINEERED PRODUCTS MANUFACTURER

INVESTMENT VOLUME
- Investment volume in projects should not exceed €2.5 million until first payback

PORTFOLIO STRUCTURE/ RISK PER PROJECT
- Project portfolio contains five to seven projects with an average investment volume between €0.5 million to €2.5 million

FURTHER CRITERIA
- Closeness of the project to current business model (ambition level)
- Contribution to strategic targets

EBIT CONTRIBUTION
- Projects should generate a positive EBIT contribution after maximum of three years

NEW DIGITAL BUSINESS MODEL

3.4   Use open innovation as much as you can

For both evolutionary and revolutionary innovation, open innovation can become a key success factor for speed, cost leadership and quality of implementation. Open innovation can be value adding along the entire innovation process, from idea generation via a hackathon, to co development of an entire or partial solution. Incumbents can tap into know-how resources they currently do not have and increase speed and cost effectiveness of development.

3.5   Share risks with your innovation partners

Depending on the collaboration type, open innovation can significantly influence the risk profile of the project at hand. Especially when your partner brings in complementary know-how from the digital world (e.g. scaling platforms). Therefore, we highly recommend bringing in partners for revolutionary topics where in-house know-how is limited. A co-investment from our experience increases success rates and lowers the company's exposure. Of course it might add additional complexity – so a watchful approach is recommended.

OPEN INNOVATION CAN BECOME **A KEY SUCCESS FACTOR.**

EXAMPLE:
INTERNATIONAL BANK – HACKATHON ON NEW BUSINESS MODELS

A leading international bank organized a hackathon to develop ideas for new business models based on the new EU payment regulation "PSD2."

Of course, the bank had already developed its own ideas on new business models but wanted a fresh view. After a two-day hackathon with start-ups and students from various universities, the list of potential new business models grew significantly.

> The jury selected two ideas for further maturation and the winning hackathon teams became part of the maturation teams.

The bank successfully fed the innovation process and ensured that external ideas were considered equally to internal ones.

3.6 Think big, move fast, fail fast and forward

In the digital world, scalability is key. The market does not sleep, so one better moves fast. To fail fast, companies should make sure to identify and solve the deal-breaking factors first, whether this is a technical solution or securing a vital partnership. If crucial prerequisites do not work out, it's better to kill the project. This helps to save funds as one redirects as soon as possible. If there is failure, incorporate the learnings and move on.

Now how are these key learnings incorporated into the company to deliver the results aimed for?

Before doing that, we have to take a look back first. Do you remember when your cable or telco provider over a decade ago tried to push content services with pay as you watch? How about your mail order company trying to establish an online sales channel? They had the customer interface, the customer data, established infrastructure and the funds – actually, they had it all to win. However, Netflix and Amazon completed the race. What is it that made them win and their competitors lose?
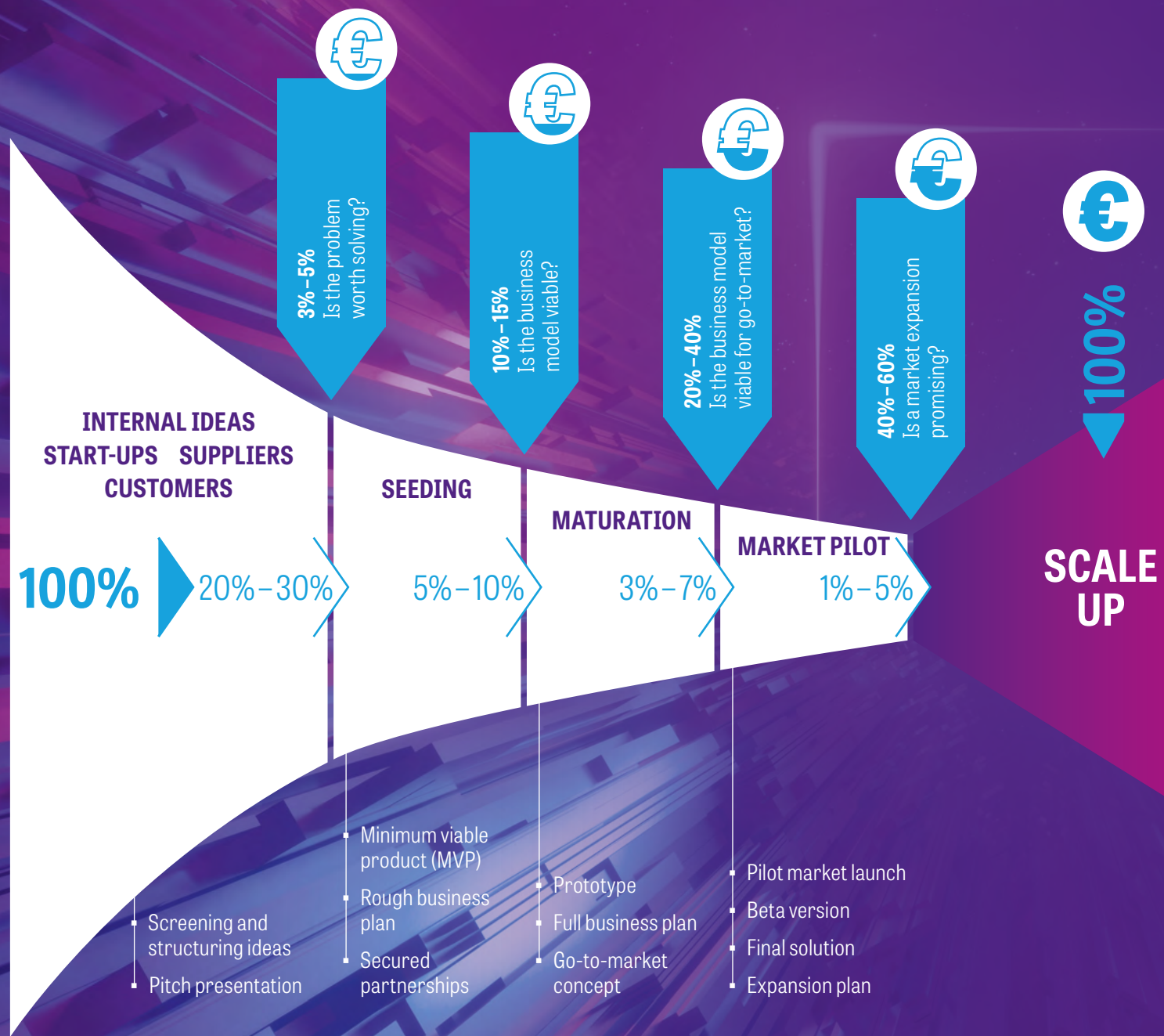
Even with the right digital strategy and the right organization, there is no guarantee that a new business model, whether it is digital or not, will succeed. But there is a way to increase the probability. For this to happen, a clear stage-gate process with comprehensive governance creates transparency for all parties involved and makes sure your company consistently adheres to key learnings. So the solution is in the active management of the digital funnel:

- Frame and freedom in the beginning
- Speedy development and prototyping in the design frame
- Push and multiplication in the scaling phase

The funnel and the underlying stage-gate process itself allows for fast screening of ideas, e.g. through innovation boards. Each stage gate ensures that the solution at hand is ready for the next stage.

The first stage gate checks if the problem is worth solving. If so, the seeding stage requires the team to provide a proof of concept with a minimum viable product (MVP) and a business model canvas. Decisive is that the MVP is tested with (potential) customers and the customer feedback is incorporated and provided for the second stage gate. This is the phase in which the absolute customer orientation, in which the team must excel, comes to the fore. Only if this target orientation is secured can market success rates increase dramatically.

Effectively Managing the Digital Funnel

OPEN INNOVATION

**INTERNAL IDEAS
START-UPS   SUPPLIERS
CUSTOMERS**

SEEDING

MATURATION

MARKET PILOT

SCALE UP

3%–5% Is the problem worth solving?

10%–15% Is the business model viable?

20%–40% Is the business model viable for go-to-market?

40%–60% Is a market expansion promising?

100%

100% → 20%–30% → 5%–10% → 3%–7% → 1%–5%

KEY ACTIVITIES

- Screening and structuring ideas
- Pitch presentation

- Minimum viable product (MVP)
- Rough business plan
- Secured partnerships

- Prototype
- Full business plan
- Go-to-market concept

- Pilot market launch
- Beta version
- Final solution
- Expansion plan

The second stage gate checks business model viability in terms of solution (MVP) and monetization (business model canvas). From our experience, many incumbents do not have sufficient in-house know-how to decide on radical or purely digital business models. It can be, therefore, critical to include specialized venture funds or business angels on decision boards. A potential co-investment as described with specialized players reduces risk and often increases success rates.

The maturation phase evolves the MVP to a prototype. Again, customer involvement, testing and iterations are key. Depending on the maturity of the prototype, some companies decide to engage in broad testing with a public or semipublic beta version. The more you test, the better the solution becomes. Apart from the solution development, a fully fledged business plan including the go-to-market concept is required for the third stage gate. Here it can be promising to support the team with a dedicated business planner who both provides functional know-how and challenges the business plan assumptions.

The third and fourth stage gates check for market readiness of the entire concept. If given, the key decision is whether to market at small or large scale. Typically, a pilot market launch is more suitable, as it allows to keep financial risks lower and incorporate further learnings for the full rollout. In some cases, the first-mover effect is more important and an immediate full market rollout is the right choice.

Each stage gate ultimately gives you the opportunity to stop the idea or send the team back in the previous stage to rework it. It is therefore an excellent way to ensure quality, control costs and reach the anticipated returns.

The stage gates are key governance instruments when developing new business models. However, you do not want the stages themselves to be black boxes for you. Regular project progress reports, including qualitative and quantitative information, make sure you know progress and fund usage. The more you test, the better the solution becomes.

SHIFT IN FOCUS: FROM MVP AND PILOTS TO PLATFORMS AND SCALE.

EXAMPLE:
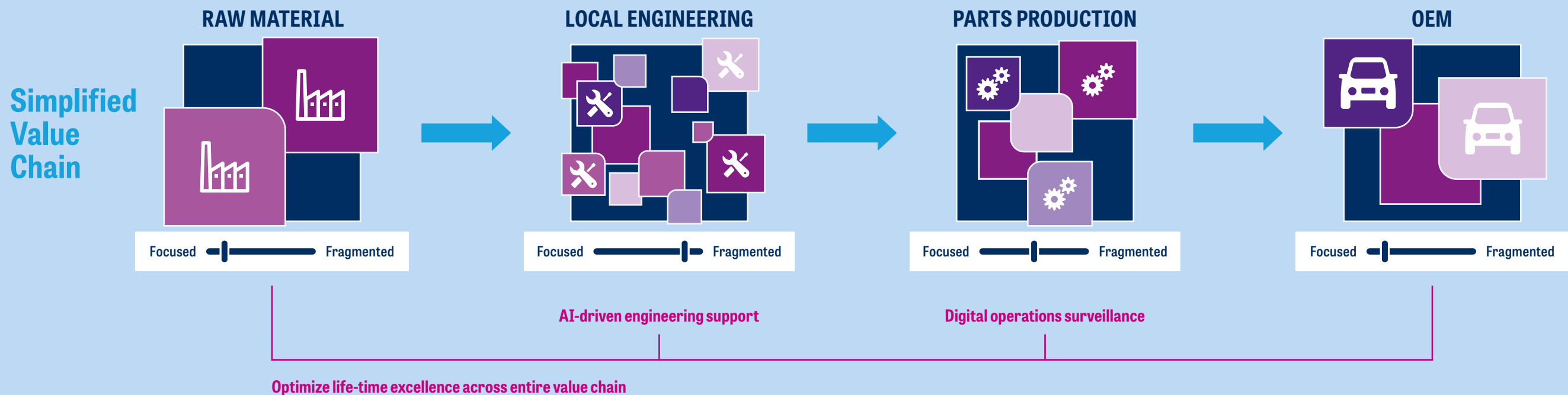## MATERIAL PRODUCER – NEW DIGITALLY ENABLED BUSINESS MODELS

A leading international raw material producer performed a pilot project developing a moon shot digitally enabled business model.

An industry that is actually not famous for being a digital frontrunner. The only set parameters were the raw material type and the target customer industry (automotive), but the project outcome was completely unclear at the beginning. An international interdisciplinary team of 15 top managers and engineers first generated an understanding of the entire value chain in which the company was at the very beginning. The team radically focused on their customers, identifying the customers' key purchasing criteria and existing pain points. This enabled a

sophisticated customer segmentation across six key regions. The company very quickly noticed that the entire value chain was not industrialized but fragmented across numerous SMEs relying on their human engineering experience. These insights were combined with global megatrends and trends in the automotive industry (e-mobility, autonomous driving, increasingly rigid environmental regulations, etc.).

> To create business model ideas, the team defined challenges on how to solve current and future customer problems (e.g. increased complexity, higher quality standards, etc.).

In the next step, the team matched digital technologies to the defined challenges and identified which digital space might actually support the solution. In the process, 12 business model challenges were generated out of which the board prioritized three. In a design thinking break-out session, the team outlined the business models, created minimum viable products and defined the business model canvas. A key success factor was the radical customer centricity: From clearly understanding the customers' pain points with countless interviews to immediately testing MVPs and improving in the iteration phase. The results were revolutionary! A full knowledge consolidation of the entire value chain, supported by artificial intelligence, offered new digital services on a global scale. The implementation of results is continuing successfully and further pilots with other customer industries and material types are being launched.

Simplified Value Chain

RAW MATERIAL	LOCAL ENGINEERING	PARTS PRODUCTION	OEM
Focused — Fragmented	Focused — Fragmented	Focused — Fragmented	Focused — Fragmented

AI-driven engineering support　　**Digital operations surveillance**

Optimize life-time excellence across entire value chain

When it comes to making a difference going forward, scalability is key. The sole focus on creating minimum viable products and on getting a pilot out needs to change. Create rather fewer solutions, but focus on quick and easy scalability to exploit the benefits across the company. And be honest within the management teams on what really works and is functioning. The focus needs to shift away from isolated features that people like to talk about at the numerous fairs and exchange roundtables. The focus needs to shift to doing and executing – supported by a managed buildup of capabilities within the companies DNA.

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