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Making smart platforms stick

How to sustainably anchor a smart platform strategy in an organization



Agenda

Anchoring of smart platforms		2
01.	Organizational structures	9
02.	Formal processes	13
03.	Systems integration	19
04.	Performance management	23
05.	Mindset and culture	29
Looking ahead		33
Authors and contact		34

Making smart platforms stick

How to sustainably anchor a smart platform strategy in an organization

In 2019, we published *"Smart platforms: Cracking the complexity challenge of project industries."*[1] In this article, we explained the concept of a smart platform strategy and modularization (Exhibit 1). The feedback from numerous project-based companies across different industries highlighted once again that modularity is a topic that remains high on their strategic agendas. Modularity helps combat the uncontrolled growth in solution[2] complexity in several ways: costs are reduced by minimizing operational complexity, competitiveness is increased by accelerating project delivery, and customers benefit from more competitive pricing. A higher-quality solution and more flexibility are also clear benefits of a modular approach.

The smart platform strategy resonates well with many companies and proves to be applicable in various contexts. For companies that are at the beginning of their platform journey, it provides a basis for how to organize and communicate their journey within their organizations. For companies that have already embarked on their platform journeys, the strategy helps put their identified challenges into perspective and derive concrete actions going forward.

Regardless of where a company is on its journey, one challenge is common: making smart platforms stick!

Even if companies have successfully created and begun implementing a competitive, modular portfolio and achieved success with their modular solutions in real projects, many see themselves faced with challenges regarding their long-term ability to hold on to this strategy. Given this concern, the focus of this article is on what is required of a company to firmly anchor a smart platform strategy deep within its organization—going beyond just the design of modular solutions and making smart platforms part of its DNA.

"We tried to harmonize our portfolio once already but fell back into old habits. I think we underestimated how much would be needed to change how people operate."

Regional management team member

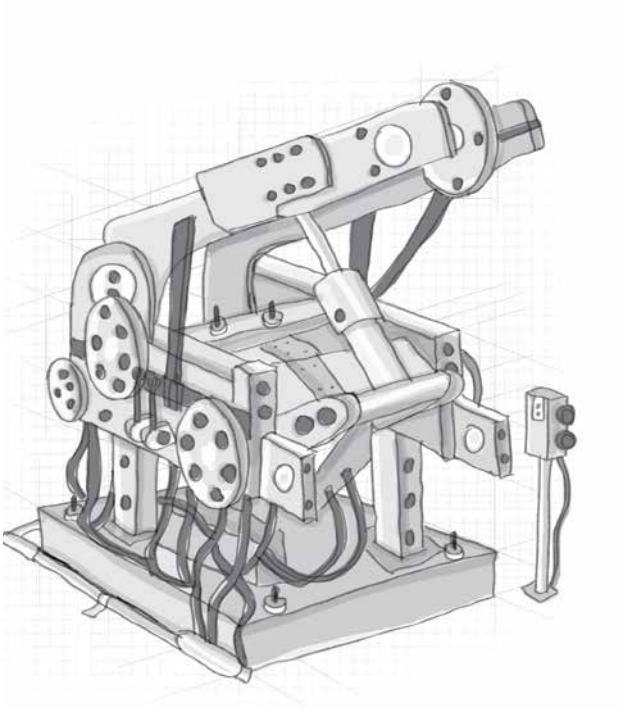
[1] See: https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/how-smart-platforms-can-crack-the-complexity-challenge-in-project-industries

[2] The article refers to "solutions", which is typically how the deliverable is described in low-volume project-based industries. It can be seen as a synonym for "complex products".

Exhibit 1

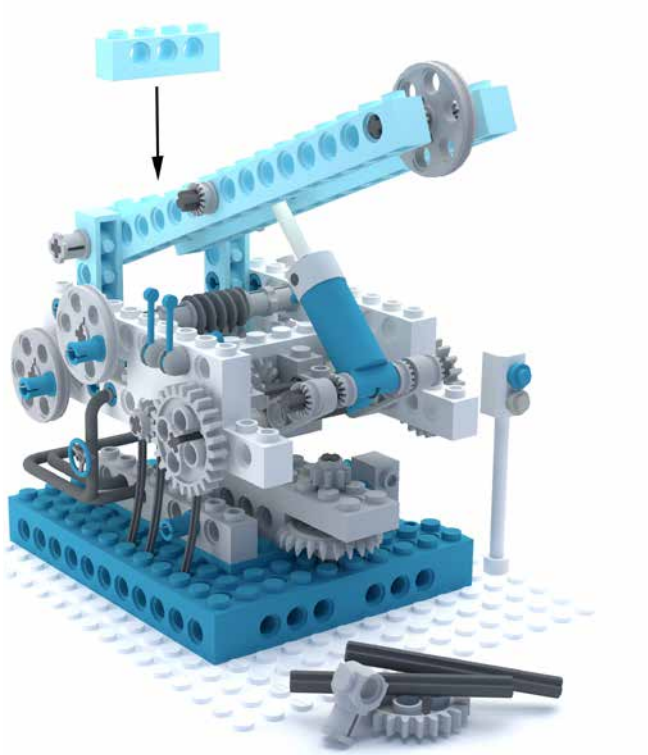
Smart platform strategy compared to typical situation in project industries

From fully customized solutions …



- Starting point is the copy of an old reference machine
- High number of options without clear customer benefit
- Missing defined interfaces lead to high engineering effort
- Firefighting to solve issues on customer sites
- High uncertainty in project scope at contract signing

… to customized, yet modularized smart platforms



- New offers are configured using ready-to-use building blocks
- Projects tailored to customer needs with higher margins
- Engineering focuses on innovation, rather than reinventing existing solutions
- Efficient and stable processes based on proven modules
- Basic design 100% clear at contract signing



Smart platform strategies often start successfully, but three types of challenges often lead to "slippage"

Even after conducting successful pilots for developing and implementing modular solutions, some organizations struggle to translate that approach into a new standard way of working. Three archetypes of challenges seem to undermine many companies' attempts to take smart platforms from a "project" level to a fundamental and enduring business strategy.

1

Organizational structure is not implemented properly

After an initial focus on the more technical aspect of modularizing the portfolio, organizational requirements for a successful end-to-end management of that portfolio are sometimes neglected. Companies often fail to acknowledge the long-term investment needed to make change stick: clear ownership structures, adjusted roles and responsibilities, and simplified decision processes fail to get implemented. Once the program management support is ramped down, the organization falls back into old ways of working.

2

The benefit is not immediately visible

As mentioned, the key objective of modularization is to reduce complexity costs or increase customer value by creating a more competitive product portfolio. However, no one wants to invest in a year-long (or even years-long) implementation of a platform strategy only to find out in the end that there are no tangible benefits. Without early, clear, and measurable corporate objectives with ambitions that grow over time, the impact of the smart platform strategy doesn't become evident for quite some time, and the strategy loses momentum.

3

Maturity of smart platform thinking is unbalanced across the organization

As a smart platform strategy is inherently cross-functional, certain challenges arise around the pace of different functions in the organization. In particular, different levels of maturity in understanding and implementing the smart platform strategy between R&D and sales can lead to misalignment and misunderstanding between two key functions in bringing the smart platform strategy to life.

Five principles can help anchor smart platform strategies

Five principles address the challenges described on the previous page and help companies embed smart platforms in their DNA, giving them a better chance at sustainability beyond just a successful pilot (Exhibit 2).

Exhibit 2

Five principles are key to ensure sustainable and lasting impact of smart platforms strategies

1 **Organizational structure**

Establish clear ownership for smart platforms and its elements

2 **Formal processes and mechanisms**

Anchor smart platforms in key processes end-to-end from sales to execution

3 **Automated systems**

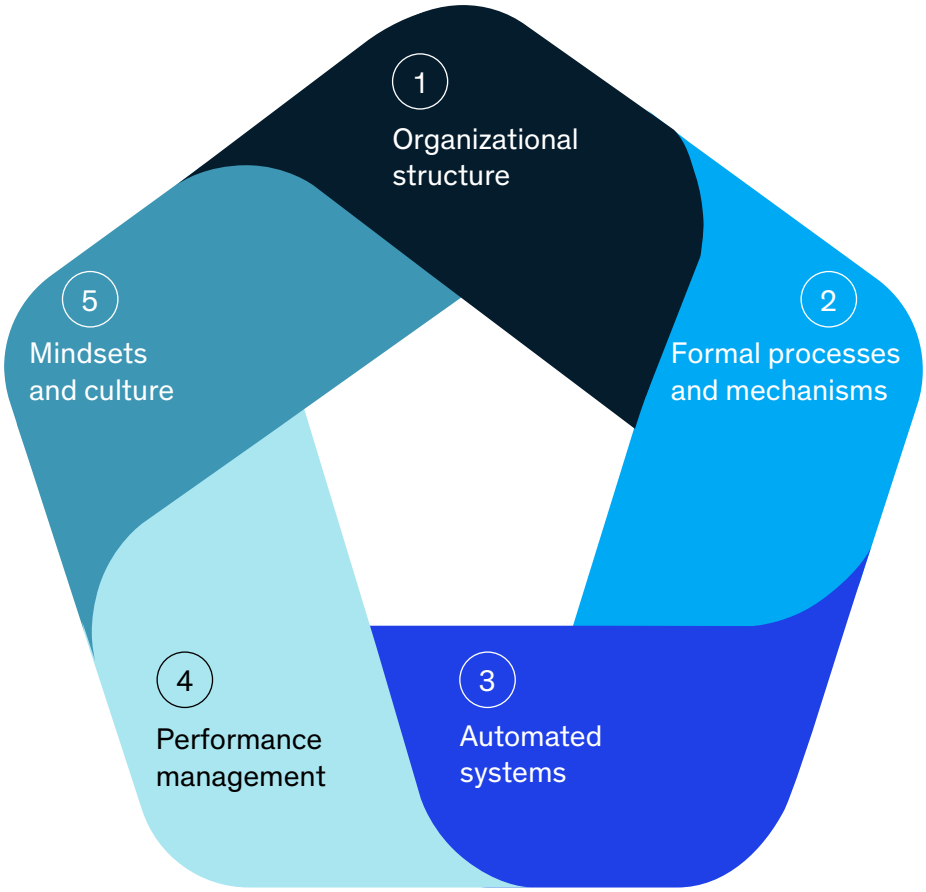
Adjust or implement automated systems to manage workflows adapted to smart platforms more effectively

4 **Performance management**

Establish performance management and systematic performance dialogues to ensure progress and impact

5 **Mindsets and culture**

Change mindset and build capabilities; tied together by communication around the vision, guidelines, and success stories



01



Organizational structures support the implementation and long-term success of smart platforms

Whether a platform remains smart and modular or creeps back into unwieldy complexity depends on decisions regarding if and when elements are added or customized. If a smart platform strategy is going to stick, it will be, in part, because the organizational structure—the roles, responsibilities, and authorities—in which these decisions are made supports the strategy.

At companies without a modular portfolio, the organizational structure is often focused on single projects and customized solutions. Prioritizing modularity often means a shift toward a more module-based "catalog" approach which, in turn, commonly requires new roles and responsibilities. Whereas multiple project managers once had oversight of their distinct and largely independent projects, module leads take responsibility for standardized modules that span across projects. Moreover, a function focused on systems architecture and integration, called the platform lead, now works to ensure the compatibility of platform and module standards across projects. To be successful, the mandate for this cross-functional ownership of the platform must be clear and is often sponsored from the highest levels of the organization. Specifically, we identified three roles to support the longevity of the modular strategy:

Module leads

Global module development and driving module innovation is owned by module leads who also manage module complexity and full lifecycle costs. They decide on the introduction or phase out of module variants and ensure that economies of scale and best practices are applied and transferred between platforms.

Platform leads

The platform development and strategy is defined by the platform leads who carefully manage the complexity of the platform and the underlying interfaces. They also drive platform innovation and make sure that the platform fulfills all requirements.

Product portfolio managers

The global and regional product portfolio is defined by the product portfolio managers based on market insights and required features. They also ensure there is sufficient differentiation across products within the portfolio.

Take, for example, a company that produces forklifts. Module leads will be responsible for different modules, e.g., one for the hydraulic system, one for the chassis, and another one for the battery. All of those modules are used in different platforms each headed by a platform lead, e.g., one platform for small indoor forklifts, one for larger outdoor forklifts. The platform lead

ensures that the platform as a whole caters to the latest industry standards. The forklift portfolio manager is responsible for the specific offering of different forklifts in different markets, e.g., the special sub-zero temperature variant for use in cold regions.

The functions work together on managing the platform, e.g., if the portfolio manager suggests introducing a new variant for a certain market, the platform lead will evaluate what that means for the portfolio and if a new variant of a certain module is needed, it will be discussed with the module lead, who will then take care of the new development.

When defining these roles, companies are typically faced with multiple tradeoffs: should R&D lead the module management or would it be better to give this role to a more neutral function? How to ensure that the voice of the customer is taken into account when defining the platform? Should these roles all be covered by people in the headquarters or should more power be given to the regions? We have seen three different archetypes of ways companies have decided to answer these questions (Exhibit 3):

Technology-driven model

This structure may lend itself well to organizations with globally common requirements and relevant economies of scale across regions. This model places the end-to-end product responsibility with R&D represented by the module and platform leads. In this model, product management (e.g., product portfolio manager) is often organized within or close to R&D. The benefit of this model is that R&D has control over technical specifications and can sustain the modular system through internal incentives. The tradeoffs are that R&D tends not to have a complete overview of the complexity implications throughout the full supply chain. A model with such a strong technology focus may also lack sufficient understanding of the customer.

Market-focused model

For companies operating in fast-moving markets and with limited economies of scale across regions, a market-focused model may best support the sustainability of a smart platform strategy. This structure takes advantage of a region's understanding of local requirements and their ability to respond quickly to local market trends. Module and platform leads are often placed within separate and regional departments. The product portfolio manager has a clear customer and sales focus. The decentralized nature, however, can lead to conflicts between regional approaches and global standards. This could result in limited global coordination and difficulties in obtaining a complete overview of variants and in capturing full synergies.

Balanced model

In between the technology- and market-driven models is a structure that can work for companies with different regional organizations that have similar requirements. The balanced structure enables close alignment of the portfolio and the platform strategy. A central function (e.g., platform lead) thereby helps resolve conflicts between R&D (e.g., module lead) and sales (e.g., product portfolio manager).

These three roles do not replace the classic customer project manager, but they influence that position's roles and responsibilities. For example, within this new organizational structure, project managers would now be required to use the existing basic parts of the smart platform and must obtain approval if they want to deviate from the platform. The project manager now focuses more on the classic project management tasks and less on new development. Therefore, on top of introducing new roles, the roles and responsibilities of existing roles must be redefined.

Besides the specific roles needed to anchor a smart platform strategy, a broader adjacent question remains on how to structure the operating model of the R&D organization. Several established companies have started the journey toward an agile operating model. The agile transformation acts as an enabler for the smart platform strategy: breaking down customer values and business goals into prioritized feature sets that are developed by agile teams is a good foundation for incorporating smart platform development. The details of an agile operating model are not the focus of this article; however, they should be considered along the smart platform journey.[3]

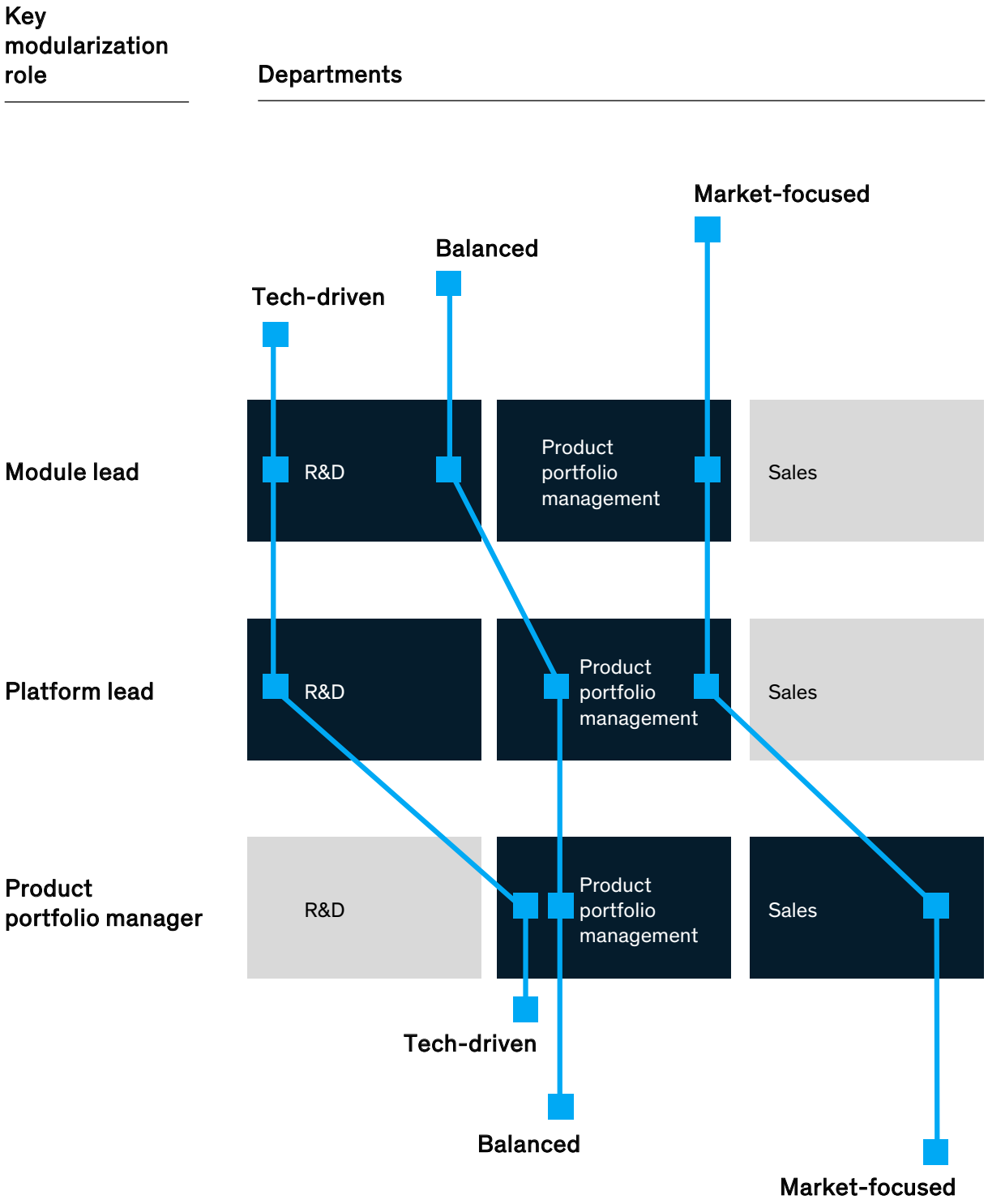
"Our predefined modules do not sufficiently match market demands. We are missing the role that links R&D with sales."

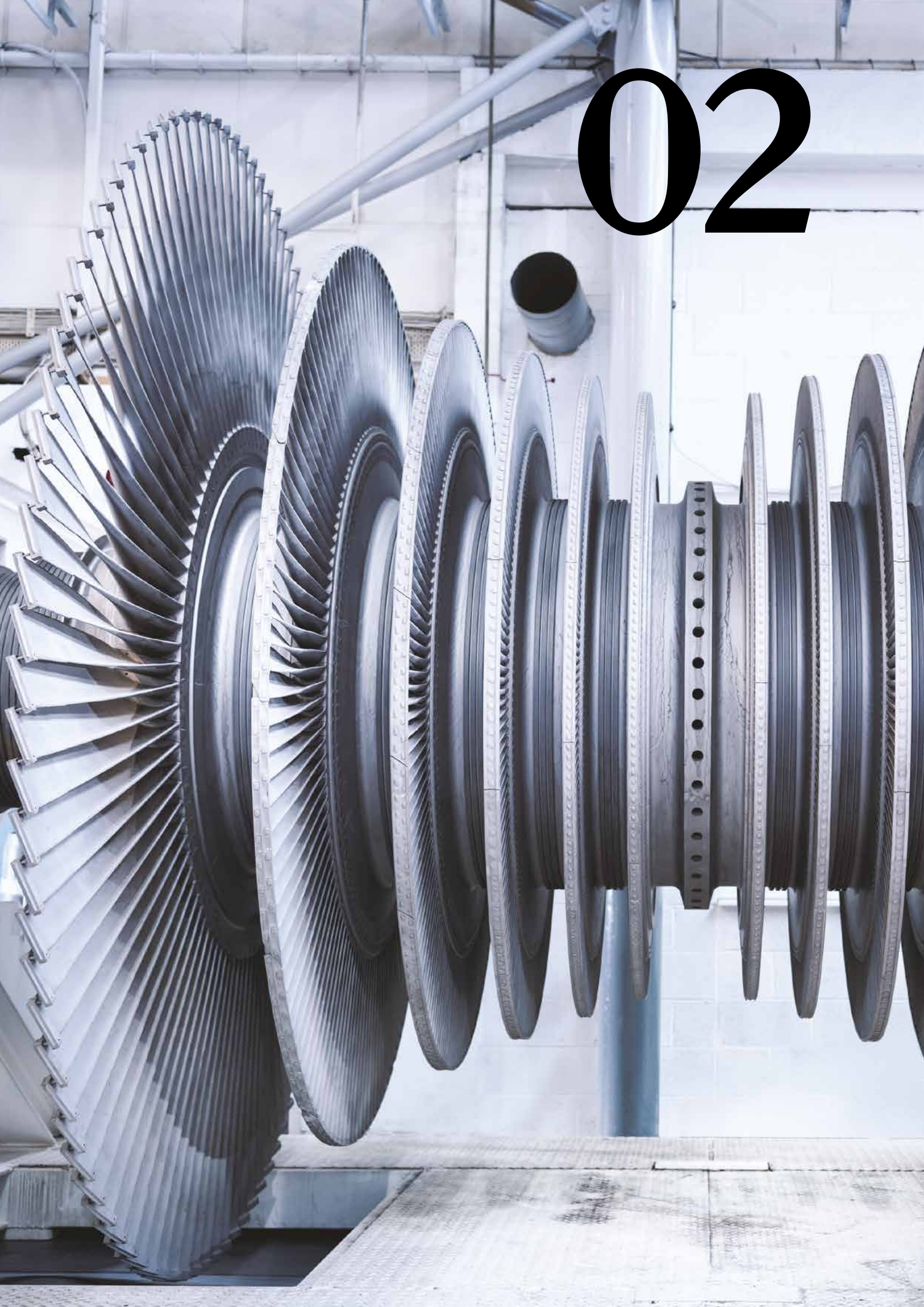
Head of R&D

3 For more details, see our article "The journey to an agile organization." See: https://www.mckinsey.com/business-functions/organization/our-insights/the-journey-to-an-agile-organization

Exhibit 3

Responsibilities and roles vary based on the selected strategy





02

Formal processes and mechanisms ensure that the smart platform strategy becomes completely embedded in daily work

The easier it is to depart from established smart platform processes, the more likely an organization will slide back into the inefficiency of excessive complexity. In addition to many others, there are two areas in particular where formal processes and mechanisms must be adhered to in order to lock in the smart platform strategy: sales and portfolio management.

Sales

In sales, the process goal is to sell a harmonized portfolio from the lead stage all the way to closing (Exhibit 4). If projects are not defined and sold in a modular way from the beginning, a smart platform strategy is moot. In order to avoid that, facilitating platform compliance as well as adequately training the workforce are important.

Facilitating platform compliance

The sales process should include mechanisms that guard against moving away from the platform principles. In the early sales phase, transparent measures should be put in place to review platform applicability, to ensure that a modular solution is explored from the beginning and sales activities are focused on platform-compliant projects rather than on those that are likely to deviate from the platform. A steel plant engineering company, e.g., determined whether to participate in a project bid based on a newly introduced milestone meeting at the very beginning of the sales process, which assessed the fit between the request and their smart platform strategy.

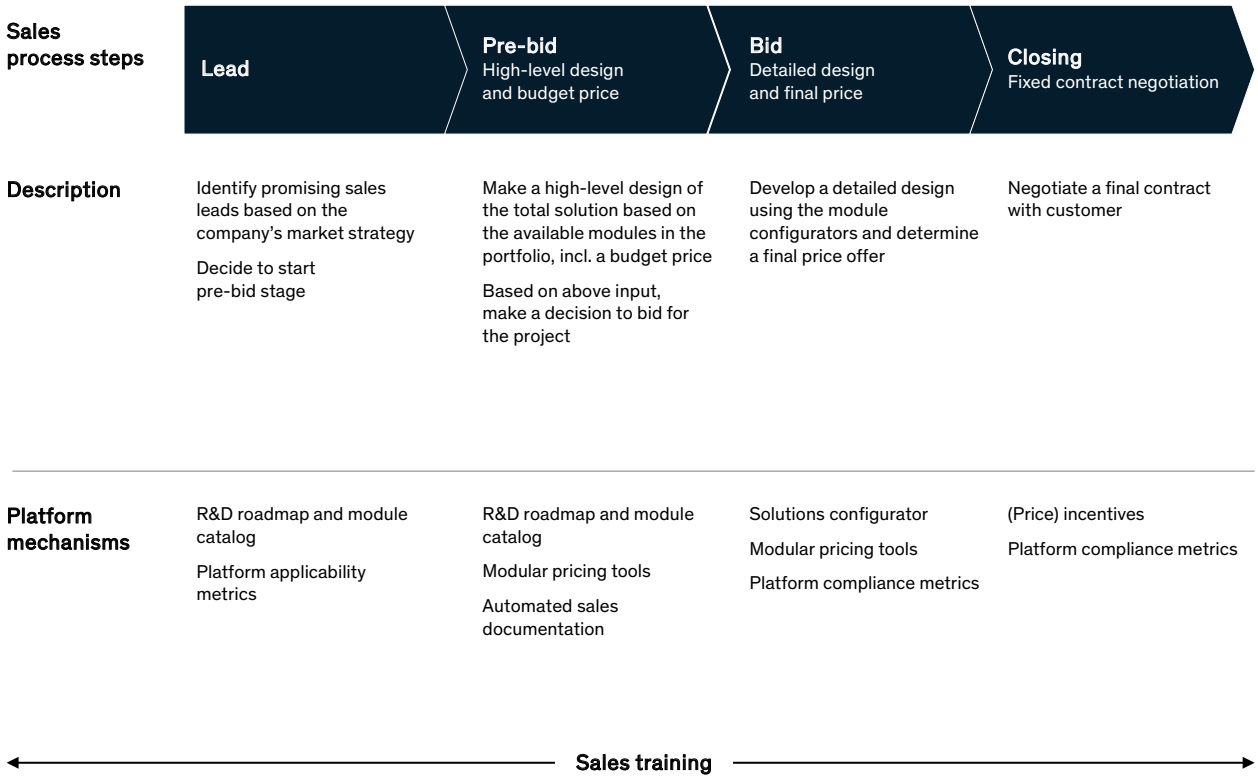
In later sales phases, such an applicability measure could be replaced by platform-compliance measures. In general, any deviation from the platform should be signed off by a platform compliance board (consisting of relevant senior management representatives) to centrally safeguard the platform principles. Each project needs a clear justification for any deviation it seeks. Any approvals of deviation should loop back to the module and platform leads to take a conscious decision on a potential update of the smart platform. An aerospace company, e.g., had their module leads attend all key milestone meetings for each project to make sure projects did not deviate from the smart platform strategy, but also to ensure the module leads became aware of the discussions and needs around their modules.

Training the workforce

The shift from engineer-to-order to configure-to-order is a radical change that requires regular training to promote best practices and ensure homogeneous approaches across sales regions and teams. The focus of this training should be on the latest platform-compliant products/modules in the catalog, understanding the advantages for both the customer and the company, and available supporting tooling. Having the training sessions led by the sales management team highlights the importance of the platform and strengthens the impact of the training.

Exhibit 4

Different platform mechanisms help anchor the smart platform approach across the sales process



“Being flexible about customer requests, even if they are very particular, is one of our core strengths. So, we introduced a non-standard request process to introduce highly customized solutions but make sure that they do not negatively influence the rest of our modular system.”

R&D manager

Portfolio management

The processes related to portfolio management span across three areas: adding variants, removing variants, and maintaining variants.

Adding module variants

Variants can be added to the portfolio by either external prompting (i.e., customer requests) or internal prompting (i.e., technology innovation). In the case of the former, it is important to have a healthy separation between those who might benefit from additional variants (e.g., sales) and those who have the authority to add a variant. To avoid conflicts of interest and give modularity its best chance, a relatively independent board should be entrusted with variant approvals. This board will seek the input of multiple stakeholders—including module leads, platform leads, marketing, sales, etc.—and calculate the cost of complexity. If the push for adding variants comes from the customer, proper evaluation of the benefits of the new variant through a nonstandard request process is necessary. To avoid proliferation, some companies use the rule that for each added variant, an existing variant has to be removed.

Development of new modules or variants should be done by a cross-functional development team. The perspectives of all relevant stakeholders (e.g., sales, R&D, supply chain, operations) throughout the lifecycle of a module should be taken into account when developing new modules. Finally, the role or team that requested the new variants should approve the new variant after finalizing the development phase to make sure that the variant fulfills all expected requirements.

Maintaining module variants

Establishing an effective module maintenance process is necessary to keep the smart platform strategy up to date and aligned with customer requirements as well as market standards and legal specifications. For some companies where the rate is, by definition of the business model, very low, it might not be feasible to keep the detailed documentation and calculations of the entire variant portfolio up to date. In such cases, the supporting documents are continuously updated for reference variants only and used as the starting point for new projects.

Another very effective instrument in the module maintenance process is a (semi) annual portfolio conference, where all modules of the platform are reviewed. The review can be supported by a “take rate” analysis, which evaluates how often a variant is selected by the customers. Customer needs and the technology innovation roadmap can be aligned with the module development roadmap, and the addition of new module variants to the portfolio can be proposed during this conference. Modules with a low take rate or negative business case can be identified and ultimately removed from the portfolio.

Removing module variants

To ensure variants that overlap with each other or are not in demand by customers are removed from the portfolio, a regular review needs to be formalized, e.g., as preparation for the biyearly portfolio conference. If the decision is made to remove a particular variant, it is also important to ensure that the decision is communicated to relevant stakeholders—e.g., informing the sales team that the variant has been removed from the catalog or configurator—and that adequate support for an “end-of-life” process of that variant is secured.

“It proved to be critical to ensure that variants we had decided to remove from our catalog were actually blocked in all systems. In the beginning, we kept them as a reference for our spare parts business, but they were still being used every now and then even though they were flagged as ‘retired.’ It only stopped once we made it technically impossible to include those variants in sales offers.”

Technical director

“Cross-functional alignment in the definition phase of new variants helped us create buy-in for the modular platform—the platform was jointly defined as one team and not only by one or two functions.”

Sales engineer


03
Monitr
Setup
Edit
Prog edit
Relative posn
X -701.507
Y 269.273
Z -150.000
Program posn
X -79.640
Y 95.438
Z -150.000
MDI set ended
Search Restart Edit Trace Check Offset Coord
X Y Z
AIR READY
ATC READY
X2 Y2 Z2
ALARMS
MDI HANDLE
AUTO
EDIT
POWER
ON
OFF
EDIT KEY
EDIT LOCK
EDIT OPEN
EMERGENCY STOP
START
FEED HOLD
-4
+Z
-Y
+X
-X
+Y
-Z
+4
F2
AUTO
ON
OFF
FWD
STOP
REV
AIR
LIGHT
TOOL MEASURE
NEXT TOOL
TOOL
RESTORE ATC
RAPID
R0
25%
50%
100%
F3
F4

Automated systems integrate smart platforms into all relevant workflows

Automated systems help weave modularity into the very fabric of the organization. With the help of IT tools, the commitment to smart platforms not only becomes an integral part of how business is conducted but veering off the path becomes more difficult. Tools can either be adjusted to incorporate the smart platform strategy or be newly introduced/ developed to accelerate the adoption of smart platform thinking.

The following IT-enabled tools are examples that have become reliable ways of making smart platform strategy stick at many companies.

Solutions configurators

Solutions configurators, at the heart of smart platforms, can be implemented to help strictly link customer requirements to available module configurations via predefined rules (Exhibit 5). The tool therefore represents the single source of truth, a jointly maintained system that includes all the rules and covers all the modules of the smart platform. As such, this tool is a powerful enabler for positioning the platform and its underlying modules prominently within the sales and solution design phases and should be introduced as soon as possible. To quickly implement such a configurator, many companies work with minimum viable products. For example, an Excel file containing all variants and rules was used at a plant manufacturing company, while a manufacturer of construction vehicles had a simple web app programmed. This helps to establish a rule- and fact-based modular way of thinking in the organization early on, gather findings for the development of the final configurator, and verify the market applicability of available variants. The configurator could subsequently be neatly tied to the modular pricing rules, automated sales documents, existing ERP systems, and the R&D roadmap—there are multiple ready-to-use IT solutions on the market. The link to the R&D roadmap is especially important in order to obtain required information about the development status and potential updates of each variant.

Modular pricing tools

Modular pricing tools are convincing enablers for both sales and customers for whom price is a key factor in their discussions. By transparently making the link between complexity and price through connecting the solutions configurator to the pricing tools, modular pricing tools set the right incentives and highlight the benefit of adhering to the smart platform boundaries. Specifically, platform-compliant solutions should have cost or lead-time advantages, whereas more specialized or highly customized solutions should be penalized through the inclusion of additional costs of complexity. For example, an oil and gas company that was struggling from a significant proliferation of the portfolio driven by very customized requests from sales decided to clearly split their product portfolio in catalog and custom products, ensuring requests from catalog had significantly lower costs and much shorter delivery times. Making the difference visible helped to significantly increase the share of products sold from the catalog without any customizations.

Additionally, a stable module portfolio helps an organization to introduce value-based pricing and maximize profit margins based on the actual value of certain modules. With the help of CPQ systems (configure, price, quote), the modular pricing logic could be combined with the aforementioned solutions configurator.

R&D roadmap tooling

R&D roadmap tooling should reflect the development of modules based on the same rule-based logic as the solutions configurator. Ensuring a smart platform way of thinking in the R&D roadmap avoids the development of specific configurations that fail to take into account future variations and supports effective prioritization by balancing complexity costs with market coverage. Linking the R&D roadmap automatically with the solutions configurator provides transparency on the status of the platform.

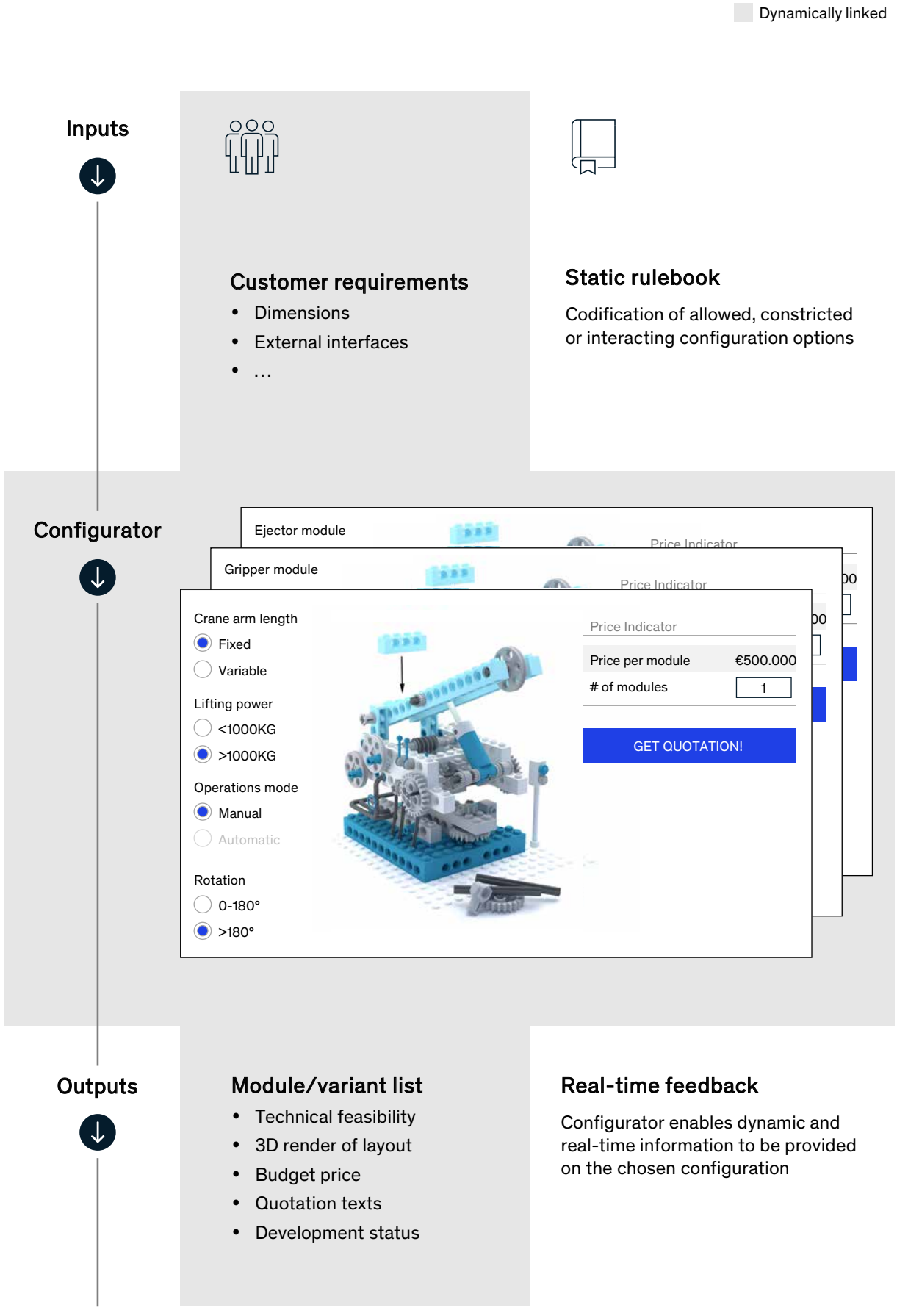
Automated sales documents

Automated sales documents can help keep companies on the modular path by shortening lead times for the creation of offers as well as reducing errors, which might lead to renegotiations with customers. These documents could include, among others, detailed technical specifications or 3D visualization. The automation of such documents has the potential to not only speed up the sales process, but its reduced effort will also incentivize sales teams to stick to the smart platform solution.

Other IT systems that should be adjusted to reflect the smart platform strategy include the parts catalog, the material master data, and the finance systems, to allow costs to be allocated not only to projects but also to modules.

Exhibit 5

Solution configurators dynamically link customer requirements to available module configurations





04

Performance management ensures progress and effectiveness of all efforts regarding smart platforms

Ensuring the longevity of a smart platform strategy requires ongoing measurement of how well the organization is performing regarding rollout and adherence to smart platforms, not only in the beginning, but also how well the progress is sustained over time. In the following, essential KPIs—which aim to measure different aspects of smart platform performance and progress—are delineated. "Platform initiation" KPIs shed light on a company's success in the ramp-up or implementation stage of a smart platform strategy. "Platform impact" KPIs measure the company's performance in the steady state, i.e., the long-term horizon where many companies find themselves sliding back into complexity.

"Platform initiation" KPIs track the progress of defining and designing the module portfolio (Exhibit 6).

Adoption level
These indicators focus on measuring the adoption level of smart platforms within the company. This includes measuring the share of employees that have received adequate training, the share of key roles that have been appointed, and how well the company has managed to comply with processes.

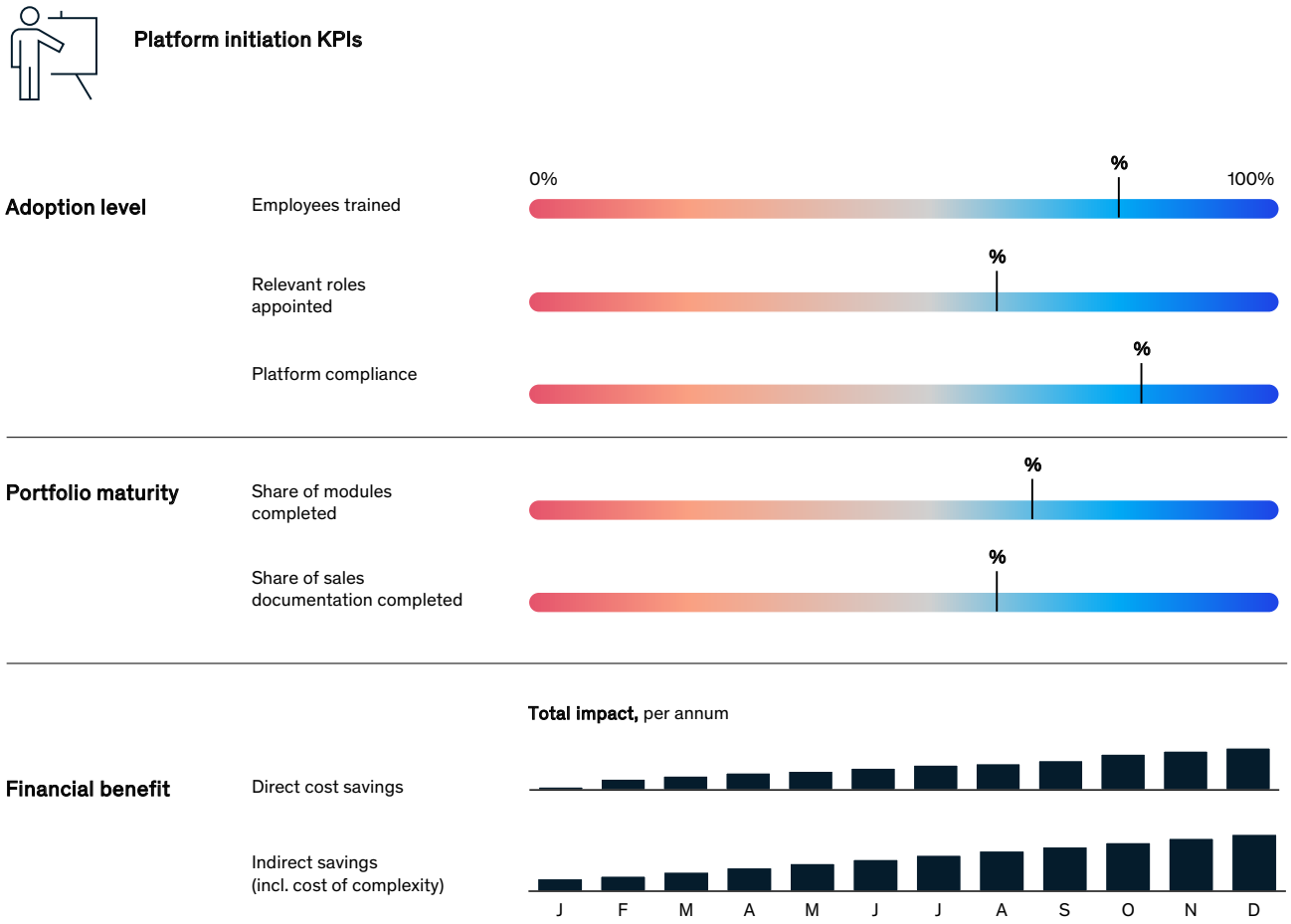
Portfolio maturity
In the first stage, portfolio maturity metrics are broken down further to track, among others, the share of modules where the technical design is complete or where the module is ready for use in sales, including all relevant documentation.

Expected financial benefits
This indicator is quantified through improvement measures generated during the project, potentially along their degree of maturity. When tracking the expected benefit, it is important to include not only the direct savings but also the indirect financial benefits, such as reduction in lead times and higher engineering productivity.

"Platform impact" KPIs typically begin in the ramp-up stage and continue tracking the ongoing impact of smart platforms (Exhibit 7) after the development of the smart platform itself has finished, and include:

Financial indicators
For product-oriented organizations, the cost reduction of all or selected "standard" products can be tracked over time. For project-oriented organizations, where every project is very different and not comparable, a reference project can be used whose cost is regularly recalculated based on the modular system. Depending on the effort of calculation, this can be done on a monthly, quarterly, or yearly basis.

Exhibit 6
Platform initiation KPIs focus on tracking the progress of defining and designing the module portfolio



Portfolio time expenditure
A smart platform strategy not only aims to reduce material costs through standardization, but also to decrease the lead time from a customer request to the final deployment and free up valuable resources for additional customer projects. Transparency on the number of hours invested and lead time per project by sales, engineering, and other functions are important measures for meeting the latter two objectives.

Level of standardization
Share of non-standard requests
This KPI tallies the number of monthly requests from the sales or engineering team to change or add elements of the platform. Such a measure could be complemented by information on how many of those requests have been approved and how many of those led to new variants or variant updates. This indicator points to how well the module portfolio reflects the market demand and how stringent the organization is with approving special requests. The latter is important in order to get an early indicator for a potential drift toward the old way of working. This indicator can be measured on module, platform, product line or even overall corporate level.

Variant and part number tracking
Other standardization indicators such as variant, SKU, or part number tracking shed light on the level of standardization and supply chain complexity across the module portfolio and customer solutions. For businesses with a higher degree of customization, this KPI could be complemented by data on the number of newly created variants.

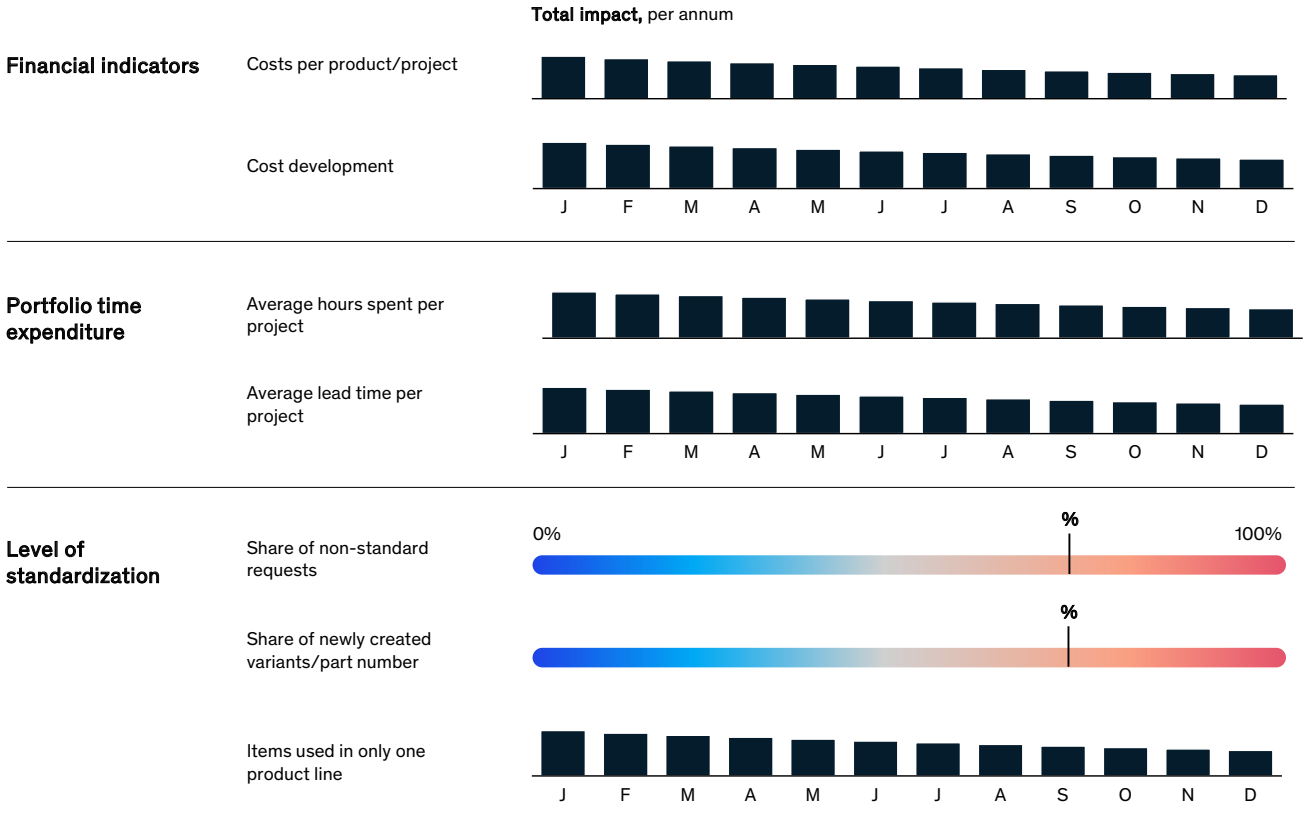
Number of items used in only one product line
An indicator for product-line-specific items, this KPI tallies the number of items that do not contribute to the standardization of the module portfolio and should be replaced, if possible, with items with a higher use across different product lines.

This list should not represent a holistic view but can indicate how to design a performance cockpit for smart platform program.

Exhibit 7
Platform impact KPIs focus on tracking the progress of defining and designing the module portfolio



Platform impact KPIs



“We track the full-cost performance of our representative products on a quarterly base. Only with these insights are we able to make the right decisions on further evolving the smart platform system.”

Head of technology

05











Mindset and culture—not just formalized structures—are critical to embed smart platforms in a company's DNA

The engineer-to-order and "we can make anything happen" mindset is deeply embedded in the DNA of many engineering companies. Building the bridge to a culture that facilitates the long-term success of a smart platform strategy requires more than a set of new systems and processes. Making a smart platform strategy stick requires a transformation of how a company thinks about its approach to business, its understanding of and belief in its objectives, as well as confidence in its ability to deliver on those principles.

We have identified five areas that are fundamental to creating the right mindset and culture and where focused efforts can help ensure that a smart platform strategy endures:

Vision

The vision or change story for modularization along with the ability to achieve buy-in from the employees is very important in embedding smart platforms into a company's DNA. Companies will need to clearly define the purpose and benefit of implementing a smart platform strategy in the first place. The reasons should be compelling –not just addressing the bottom line ("Where will we be if we successfully implement and sustain change?") but also the identity of the organization ("Who will we be if we successfully implement and sustain this change?"). Importantly, co-constructing that vision in a way that involves leadership from throughout the company goes a long way toward ensuring broad buy-in and commitment to the vision—having the top management not just support but role model the adoption of smart platforms will encourage the rest of the organization to do so as well.

Communicating the goals as more than just a "target state" but as a "credo"—a core and abiding belief—takes the transformation from just a process to purpose. One company took its vision for modularization to the level of a "constitution." Like the founding document of a nation, this vision fundamentally ties the rules of the modularization game to the organization's success.

Communication

How the smart platform journey is talked about will be key to its success and should be carefully considered in three distinct areas. First is "communication toward understanding" through the development of a common language. While the vision will be developed with many leaders at the table, there will be many more who were not part of the initial conversation. To many, the terminology used may be foreign or, at least, ambiguous, so shared definitions will be important. What is meant by "variant"? What exactly does "configuration" mean? What is a "module" versus a "submodule" and how do we define a "platform"? It is crucial to ensure consistency of language and definitions across all communications to ensure that they land as intended. While this may seem like an obvious point, in almost every project we support, we observe some lack of clarity regarding terminology and definitions, resulting in nonstop misunderstandings. The second is "communication as motivation." This is achieved by clearly and honestly letting people know that modularization takes time. Transparency on the progress of each module, including the announcement and celebration of incremental successes, both manages expectations and keeps momentum going. Additionally, fear can be managed by being honest about changes that will be seen as negative, such as job redundancies, but also about the people-level opportunities that will arise.

Finally, elevating the teams leading the effort through organization-wide communication creates a positive feel around the initiative, often generating additional momentum from the base.

"Initially, it was not very clear what it meant to have a module ready to use. In fact, everybody defined 'ready' in a different way and most of the time it was not ready at all! So, we clearly defined the requirements of a 'ready-to-use' module and also implemented an approval mechanism where the person who should use the module did the final sign-off, not the person who developed it."

Commercial product manager

Incentives

Cultivating the emotion that comes with a clear vision is critical, but the value of incentives should not be underestimated. Especially for sales, a clear system that discourages excessive customization and delivers benefits for using the platform will foster adoption and help keep the smart platform momentum going. This also implies being aware of the potential of competing incentives, e.g., rewarding salesforce proportionally to the value of a project sold, which might be higher if a project includes a lot of customization. A systematic review can ensure that none of the current incentives actually work against the objectives of modularization.

Besides these sales-oriented incentives, more generic and companywide activating mechanisms can be implemented to further promote the smart platform strategy. Examples are the celebration of successful smart platform-compliant projects and making sure senior management recognizes employees who contribute significantly to the promotion of the strategy.

Capabilities

Clearly, from a technical perspective, the relevant skillset helps get the job done. But the feeling of being sufficiently equipped also empowers and motivates those responsible for carrying out the responsibilities as the company moves from an "engineering" to the new "configuring" environment. Building capabilities includes systematically assessing gaps and conducting training sessions that build understanding of smart platforms. This training can take the form of module days, where a traditional teacher-student format is used, as well as train-the-trainer approaches. It is also important to commit to the idea that capability building is not a single checklist but an ongoing commitment. Quarterly newsletters and regular e-learning events can be part of a company's continuous learning strategy.

Transparency

For many leaders, the cost of complexity is not transparent, meaning they don't see the negative impact of creating a highly complex portfolio. The impact of a complex portfolio needs to be evaluated along the full value chain and made (painfully) visible to all leaders. Starting with the sales department, a highly complex portfolio is difficult to maintain, to price, and to assure high quality. Sourcing and manufacturing suffer from large quantities of part numbers that need to be negotiated, ordered, and stored, and scale effects are lost. Project execution is particularly difficult with a complex portfolio that limits the learning effects of repetition. These are examples of the costs of complexity; each company should seek to create transparency on the most important costs of complexity and include them in decision making.

"Each management level took us a year to convince. In such a radical transformation, you cannot overcommunicate."

Platform lead



Looking ahead

A smart platform strategy consists of more than just a competitive and tested modular portfolio; it includes a thoughtful approach to long-term sustainability. To embed the new platform way of working in the organization's DNA, the anchoring of the platform strategy needs to be addressed early and systematically. We have seen organizations create great modular portfolios and sustainably embed the new way of working in the daily business. For these companies, the smart platform approach was seen as a real game changer.

The roadmap to sustaining smart platforms will vary by company, but there are early steps that all companies can take. To get started, organizations might ask themselves some important questions to assess their maturity of smart platform anchoring:

— Who is managing our module portfolio within the organization?

— Which processes need to be adjusted or strengthened to anchor our smart platform strategy throughout the organization?

— Does our IT landscape properly reflect our smart platform ambition?

— Which formal mechanisms do we have in place to facilitate smart platforms?

— Which part of the organization is already living the smart platform approach—and where are we still lacking the mindset and behavior that are supporting the smart platform sustainability?

Honest answers to these questions can help companies gauge where they stand today and begin laying the groundwork for cementing their smart platform strategy.

Though there is no universal panacea for all organizations, we have highlighted five key principles of organizational anchoring to address common challenges. In the end, every company needs to derive their own tailored approach to embedding the smart platform strategy in the most sustainable way. The described five principles, however, could provide a basis for a holistic assessment and support the prioritization of required actions. And while not all principles are equally important, companies have to find the right balance along their individual journey.

The introduction of a smart platform strategy is a years-long program requiring significant commitment from the entire organization. This makes ensuring the right prioritization and timing of each underlying element all the more important. When well anchored, the investment in a smart platform strategy more than pays off and can propel an organization ahead of their competition.

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