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Digital

The rewired enterprise: How five companies built to outcompete

Lessons from five rewired enterprises highlight how to turn initial digital gains into enterprise-wide ones.

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For companies along their transformation journeys, promising developments remain locked away in pockets of the organization. Yes, the successes provide important capabilities and sources of value, but they fall well short of the ultimate goal: a digital-first enterprise that continuously improves and innovates to delight customers and lower costs faster than the competition.

The antidote to these bite-sized gains is stiff but necessary medicine: a complete rewiring of how the business runs, from how individuals work together, to how data is channeled to power AI models, to how tools and capabilities are distributed to hundreds, even thousands, of teams across the enterprise so they can innovate.

There is no "magic." As *Rewired: The McKinsey Guide to Outcompeting in the Age of Digital and AI* argues, it requires business leaders to roll up their sleeves and perform detailed surgery on the business. For this article, we'll take a look at how five companies did just that: Amazon, Freeport-McMoRan (a mining business), DBS (a multinational financial services business), Google, and the LEGO Group. We analyzed their strategies and actions to identify the shifts they made to reach their ambitions.

Simply doing more won't work to get you the full value. Getting to scale requires six shifts that establish new processes and capabilities.

1. From focusing on digital initiatives to focusing on the customer

Rewired businesses use data to continuously improve how they serve their customers. This creates a flywheel effect, which requires that companies be intentional about priorities and make explicit choices about what the organization will and will not do to deliver value.

Rewired businesses maintain this discipline in two ways. First, they have a simple overarching goal focused on the customer. While many companies will say they are already focused on the customer and their executives may be able to point to specific examples where that's the case, that customer focus fades the deeper into the organization you go. The commitment to the customer at Amazon, in contrast, can be found at every level of the business, including logistics and supply chain. DBS has oriented its entire digital strategy around "making banking joyful" for its customers by focusing its missions on improving customer journeys. To take just one example, the credit card origination process was a particular pain point for customers. So leadership focused on driving a relentless series of process improvements to reduce the time it took to get a credit card, from 21 days to fewer than four.

Secondly, rewired companies prioritize product management. They recognize that product management is so central to their ability to generate value at speed that they treat it as a strategic priority, investing in the talent, tools, and processes to support it at scale. The foundations of this capability are an effective quarterly business review (QBR) process, which provides leadership with transparency into progress so they can maintain focus on priorities, and strong product owners, who combine customer, operational, strategic, technical, and business skills in leading teams to develop solutions.

Freeport has come to rely on the QBR to set objectives and key results (OKRs) and invest resources in high-priority areas. It has further supplemented this mechanism by establishing senior product owners who manage product teams and help with allocation decisions. This focus on OKRs is the key factor in assuring that the work of the product teams is generating value. Google, in fact, has made it a religion to review team progress quarterly against specific OKRs. If there isn't a key result attached to the work, teams don't work on it.

Amazon has built its business around product owners, who are called "single-threaded leaders" (they operate as the single thread connecting teams). They have broad authority over their teams and their own budgets, goals, and missions. They are accountable for the success of the products they own and are empowered to make a broad range of decisions, such as prioritizing initiatives and allocating resources.

2. From hiring digital talent to developing digital talent everywhere

Rewired businesses recognize that talent is their most important asset, and they commit to building a deep, in-house bench. The LEGO Group, for example, realized at one point that about 70 percent of its code was created externally. To bring tech talent in house, it launched a social media campaign to highlight the deep technical problems it was solving and opened digital studios in Shanghai and Copenhagen. These efforts, among others, helped the LEGO Group more than double the number of its systems and software engineers.

Successful companies focus particularly on the following:

— *Creating a talent factory.* It is critical to not just attract top digital talent but also create an organization where they thrive. That means providing talent with career path options, offering opportunities to work on cutting-edge technology, and continuously building skills that the market values. Google has a program to ensure developers are frequently rotated through the business, not just to make their skills more broadly available but also to provide the developers with new opportunities to learn and grow.

— *Building technical skills.* With technology and coding techniques changing quickly, it's important to provide time for technologists to continuously refine and expand their skills. DBS launched DigiFY, a learning platform made up of seven core programs, with a mandate that each employee take at least five of them. One program trains technologists on a range of skills, including site reliability engineering, cybersecurity, and machine learning, to deepen the bank's technology capabilities. DBS also built up the business's tech literacy across the entire organization. It rolled out a "Back to School" program in which hundreds of technologists teach businesspeople about technology and vice versa. This approach has radically improved communications between the two functional areas and increased their collaboration, a foundation of rewired companies. At senior management off-sites, executives receive training on key digital capabilities, such as data and innovation and customer journey thinking. A Gandalf Scholars program offers people money to learn whatever they want, with the stipulation that they teach what they learn to others in the company. Through this program, about 20 percent of employees have been able to transition into completely new roles by year three, and about 50 percent of employees develop one to two new major skills .

3. From agile teams to a product and platform operating model

Many digital and AI transformation programs have developed a factory model where 20 to 30 centrally managed teams work in an agile manner to deliver solutions quickly. That approach, however, can't easily scale to support hundreds of teams across an enterprise.

Making the leap requires companies to put in place a distributed operating model built around products (specific solutions or services for internal or external customers, such as web search or a data asset) and platforms (capabilities that enable product teams, such as inventory management or customer relationship management). This model is able to scale because it eliminates traditional operational chokepoints, such as approval processes and budget requests, that slow progress.

A crucial factor in making a product and platform operating model work is that business and IT work much more closely together. IT, in fact, ceases to exist in its traditional role of "requirements fulfiller," though it still has a role in overseeing technology platform teams and in finding tech talent for product teams.

The LEGO Group took this idea to heart by assigning teams responsible for each digital product needed to deliver a specific solution. Critical to making this model work was that each business domain had a sponsor from the executive team and a leader from both business and IT who jointly had responsibility for delivering the outcomes in their domain. At the product team, or pod, level, a business lead assumed the role of product owner. Integrating the

business into the product management structure helped ensure the business adopted the solutions that product teams developed. All members of the product teams shared KPIs and incentives.

DBS followed a similar approach. Each platform managed a set of product teams serving an enterprise-wide need, such as payments or customer service. It implemented a "two-in-the-box" approach where leaders from business and tech had joint ownership of product teams. Platform leaders had the freedom to decide how to use those resources over the course of the year.

4. From technology as a central capability to distributed engineering excellence

On paper, releasing digital assets is simple: a team that knows its own code can rapidly make changes, integrate, test, and release. In most cases, however, that team is not working on a code base they know and control but on a large application with a sprawling and fragile code base that is being constantly modified by many teams. Furthermore, that application depends on many others, requiring extensive coordination, which is further hindered by processes that are highly manual.

To cut this technical Gordian knot, rewired companies do the following:

— *Systematically decompose IT into microservices.* Companies have made extensive use of APIs to manage the disconnect between modular front-end systems and the legacy back-end core systems. Over time, however, the core cannot keep up, and the front end goes from sprinting to waiting for the legacy core. The rewired business systematically decomposes the entire stack into microservices, flexible applications that allow teams to work without depending on other systems.

— *Use modern cloud and MLOps (machine learning operations) practices for scale.* Rewired companies are cloud first, using its services and capabilities to operate with speed and flexibility. Part of the reason Freeport was so successful

running its AI models was that it had migrated its data architecture to the cloud. Freeport was able to further take advantage of the cloud to automate many processes, such as running the data pipeline, which previously had been a laborious process of pulling data from dozens of manually updated spreadsheets. It used DevOps, MLOps, and continuous integration/continuous delivery (CI/CD) tools and practices based on clear standards to rapidly develop and deploy code in a controlled manner.

— *Enforce modularity standards.* Freedom to operate is core to technology-driven innovation, so rewired companies put in place guardrails to reduce dependencies between teams. Amazon, for example, famously mandated that any team needed to provide an API for any functionality it built. In the same vein, every microservice needed to be externalizable, so that it could be packaged and sold to customers as a product. All code also needed to be written as microservices, so that blocks of code could easily be reused without disturbing the rest of the code.

— *Enforce engineering standards.* Google developed a uniform build system (a set of tools and practices around CI/CD) that every product team was required to use, as well as shared and massively scalable infrastructure resources to support the common needs of products and businesses. All code had to follow this model, which made it easier to spread it throughout the organization. Such an approach also allows the business to enforce quality gates—for example, via automated regression testing—on any code change.

5. From centralized data and analytics to embedding them across the organization

In a rewired enterprise, data is embedded in every working team and process, available to everyone at the company through easy-to-use tools. Enabling such access at scale requires data products, which combine various relevant data elements into a format that is easy to consume for a wide range of use cases. One example might be a Customer 360 data product,

an asset that various teams can access to create customer-specific solutions. While many companies have created a few data products in their digital transformation, a rewired enterprise develops and manages a continuous flow of data products, often in combination.

DBS, for example, launched an initiative that combined multiple models to generate faster and better insights on money-laundering threats. They used rules, network link analysis, and machine learning, with a range of internal and external data sources. This helped it develop an AI-driven, end-to-end surveillance process for anti–money laundering.

Enabling the development of data and AI products requires a sound underlying data architecture to manage data flow and access. Freeport's success with its AI modeling was possible because it had a comprehensive central data warehouse, which allowed it to capture and correlate second-by-second performance readings in real time.

Google has placed special emphasis on providing secure access to data. It has created a central data repository that all Google employees can access for various product and development needs. It can store and serialize both sensitive and nonsensitive data across multiple formats. Google has also developed a tool that can synchronize data across disparate sources through a set of preselected key identifiers (such as customer ID).

6. From a focus on short-term gains to a focus on scaling through a modern culture

The ability to extract full potential value from digital solutions is the key to successful long-term transformations. Rewired companies achieve this outcome by building a culture of continuous growth driven by scaling and supported by reinforcing mechanisms. Rewired companies particularly focus on the following three areas.

Building a culture of learning leaders

As companies scale, they reach a limit as to what's possible through directive leadership. That's where culture comes in, with an emphasis on instilling

behaviors that embody the range of capabilities covered in this article. Rewired companies reinforce this culture by developing leaders who focus on the customer, are digitally savvy, and are less about "knowing everything" than "learning everything." That learning spirit propels teams to innovate through rapid testing and continuous improvement.

Leaders at all levels of the organization have a critical role in building such a culture. DBS, for example, set out to ensure that managers were leading the change, not resisting it. The company invested in training them on how to give good feedback, use data to make decisions, have empathy, and be collaborative. This process allowed DBS to empower many of their managers to become effective contributors on product and platform teams.

The cornerstone of a learning-leader culture is providing leaders with autonomy to make decisions but holding them accountable for outcomes. Amazon, for example, gives its single-threaded leaders the scope to execute their roles but also expects them to define specific customer-facing and financial targets that are inspected on a quarterly basis. An even deeper review occurs each year to determine whether each team gets additional investment or is asked to redirect its focus.

The culture shift starts with the top leaders of the business owning the change. The top leaders of the LEGO Group, for example, were explicit about needing to collectively own their digital transformation from the very beginning.

Tracking performance

To ensure accountability and that solutions are delivering their full potential value, rewired businesses track progress with the precision often reserved for cutting costs. DBS created a dashboard to monitor in real time the roughly 100 initiatives in progress. This tool was updated weekly and accessible by all employees. This allowed leadership to quickly identify issues and intervene to resolve them so the transformation could maintain momentum.

At Amazon, leaders continually check on the progress of initiatives and reallocate talent and resources to feed those that are performing well. They also embrace the "dive deep" principle, which requires leaders to stay close to the most important details of their initiatives, intervene appropriately to resolve issues, and identify risks.

Making solutions easy to reuse

Rewired companies enable a culture of autonomy and continuous improvement by making it as easy as possible to reuse solutions across different customer segments, markets, or organizational units. This commitment to reuse previously created and approved code makes it easier for teams to focus on innovating and improving solutions rather than rebuilding them. The core of this approach is assetization (or productization), where solutions are packaged in such a way that they can be easily adapted and tailored—as much as 60 to 90 percent of the solution can be reused in most cases when properly architected.

Freeport developed a machine learning model to help predict how much copper could be recovered under any set of conditions. To make this model work across sites, Freeport refactored and repackaged it so that it could be more easily adapted to other plants. In this way, about 60 percent of core code could be reused easily, while the remaining 40 percent was customized for each new mining site. The company also invested in developing a centralized code base that site-specific modules could call on, making it easier and more cost-efficient to maintain and improve code.

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Rewiring your business is a long-term commitment. But those that do it well can both build value along the way and put real digital distance between them and their competitors. This is the evolution from *doing* digital to *being* digital.

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