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Incumbent firms in traditional industries are increasingly facing challenges as the trend toward digital platforms gathers pace, and they need to develop strategies for their digital platform activities. These strategies have two major elements: 1) the tactics relating to a specific platform, and 2) cross-platform orchestration, which manages the interplay across platforms and between them and the firm's core business. Based on our study of the digital platform strategy adopted by Dr. Oetker, we provide recommendations for digital platform strategies in traditional firms.[1,2]

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Digital Platform Strategy in Traditional Firms

Incumbent businesses such as industrial and consumer goods firms have a long history of evolving through various stages of growth and coping with crises.[3] In the past, stages of organizational development featured different management practices. However, the current trend toward digital platforms involves an upheaval to existing managerial practices. Driven by digital technologies, platforms enable businesses to benefit from network effects[4] and powerful

1 Varun Grover and Kalle Lyytinen are the accepting senior editor for this article.

2 The authors would like to express their gratitude to Kalle Lyytinen, Varun Grover and the anonymous reviewers for their valuable comments, as well as the participants of the Pre-ICIS 2020 Workshop for their feedback during the presentation of the initial version of this article.

3 Greiner, L. E. "Evolution and Revolution as Organizations Grow," *Harvard Business Review* (76:3), May-June 1998, pp. 55-64.

4 Schmalensee, R. and Evans, D. *Matchmakers: The New Economics of Multisided Platforms*, Harvard Business Review Press, 2016.

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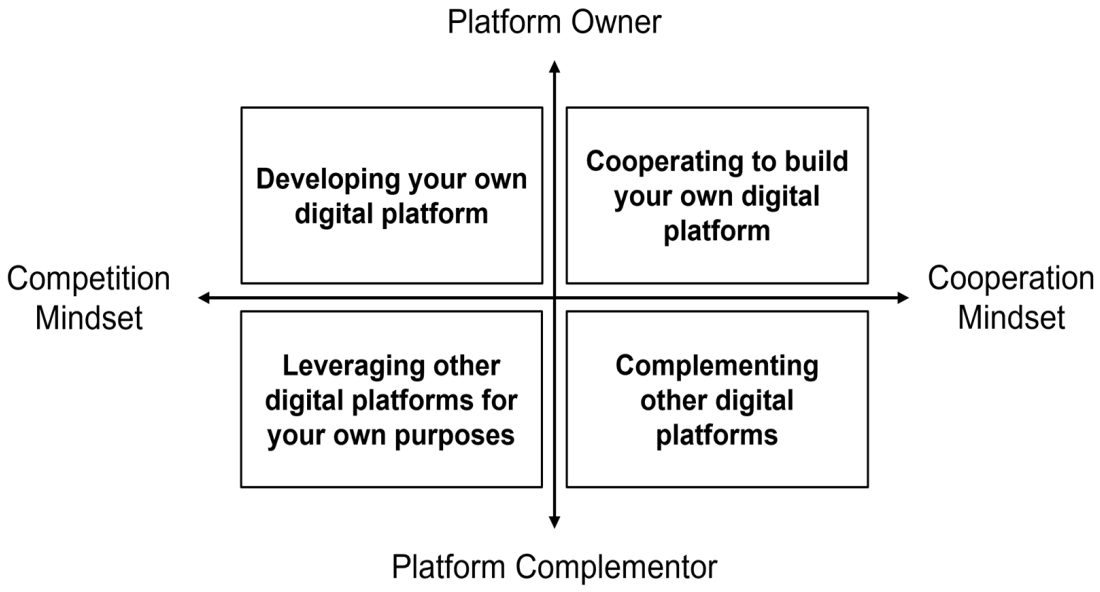
Figure 1: Four Tactics Within Traditional Firms' Digital Platform Strategy



ecosystems[5] that provide demand-side economies of scale[6] across industries. Digital platforms therefore challenge traditional firms, many of which have built their success on supply-side economies of scale. In particular, firms that operate in hierarchically coordinated linear value chains[7] face significant threats and challenges from the emergence of digital platforms. Such firms need to adopt managerial practices that will enable them to respond to and incorporate digital platforms into their operations.

In this article, we describe the digital platform strategy adopted by Dr. Oetker, a long-established German company providing baking products. From our analysis of the evolution of Dr. Oetker's strategy, we have identified four tactics that traditional incumbent firms can use in a *single digital platform strategy* (see Figure 1):

1. Leverage their own resources to build a digital platform and compete with all other potential digital platforms that address the same consumer needs.
2. Incumbents that lack a dedicated digital infrastructure or the capabilities to develop a digital platform can aspire to platform ownership by cooperating with partners that can provide the required resources.
3. Enter the digital platform business as a complementor, offering dedicated services and/or products as complements to other platforms.
4. Leverage existing digital platforms for their own purposes, for example, by promoting their own services or platforms to consumers.[8]

However, incumbent firms also need to engage in *cross-platform orchestration*, which involves managing the interplay between various platforms and the core organization to align digital activities with the firm's business strategy. This requires incumbents to balance digital platform tactics across platform ecosystems as they face coopetition (simultaneous cooperation

5 Parker, G., van Alstyne, M. and Choudary, S. P. *Platform Revolution: How Networked Markets are Transforming the Economy—and How to Make Them Work for You*, Norton, 2017.

6 Iansiti, M. and Lakhani, K. *Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World*, Harvard Business Review Press, 2020.

7 Jacobides, M. G., Carmelo, C. and Gawer, A. "Towards a Theory of Ecosystems," *Strategic Management Journal* (39:8), March 2018, pp. 2255-2276.

8 For more information on opportunistic platform entry strategies, see Karhu, K. and Ritala, P. "Slicing the Cake without Baking It: Opportunistic Platform Entry Strategies in Digital Markets," *Long Range Planning* (54:5), October 2021.

and competition) with other actors, which involves making trade-offs between open vs. closed and variety vs. unity. Karhu et al.[9] identified four approaches that platform owners like Apple, Google and Amazon have taken to making the necessary trade-offs on a single platform—leverage, control, exploit and defense. In this article, we extend these trade-off approaches by considering them from the perspective of incumbents that need to engage with multiple digital platforms.

To illustrate the evolution of Dr. Oetker's digital platform strategy, we draw on Greiner's framework,[10] which divides organizational development into a series of stages of growth (evolution) and crises (revolution). Organizations may enjoy multiple years of growth without setbacks until a revolutionary period requires "a serious upheaval of management practices."[11] In Dr. Oetker's case, the arrival of digital platforms marks the need for new managerial practices. By using Greiner's framework to present the Dr. Oetker case, we can analyze organizations' digital platform strategies against the backdrop of their stage of organizational development.

Organizational Stages at Dr. Oetker and Digital Platform Strategy Context

Stages of Organizational Development

Dr. Oetker was founded in 1891 by Dr. August Oetker, a pharmacist who developed a baking powder that he guaranteed would ensure the success of every home-baked cake. Since then, the firm has grown into a global player, building on strong supply-chain economies of scale for various fast-moving consumer goods. The firm is headquartered in Germany and has subsidiaries in many countries worldwide. In 2020, its annual sales were €3.7 billion ($4.29 billion)[12] and it had over 17,000 employees.

In a maturing consumer goods industry, Dr. Oetker has experienced long periods of moderate but steady growth. By expanding globally, the firm developed managerial practices for delegation: it became a decentralized organization with responsibility devolved to different market territories and the headquarters managing exceptions and acquiring outside enterprises. Owning several distributed lines of business requires investments in tangible assets such as production facilities, which build the core of the firm's linear value chain.

Over the past ten years, however, the way that Dr. Oetker is organized has gone through a revolution, as it moved to the coordination stage of organizational development. It faced the need for stronger central coordination to maintain and improve its linear value chains. New managerial practices involved top-level executives at the headquarters in Germany taking responsibility for developing a digital strategy, hiring staff for new international departments to coordinate global activities, and initiating a company-wide digital transformation and cultural change program. In 2016, Dr. Oetker's top management recognized that the firm needed to develop managerial practices to address the need for a digital platform strategy.

From Digital Offerings to a Digital Platform Strategy

Dr. Oetker's digital platform activities center around various "baking needs" of consumers. Although the firm recognized that its digital offerings did not immediately threaten to disrupt its traditional consumer goods business, it also realized that digital platforms can reshape touchpoints with consumers and that platforms with strong lock-in effects may hamper its ability to market and sell nondigital products to consumers. On the one hand, e-commerce and food delivery platforms were transforming Dr. Oetker's sales channels. On the other hand, social media platforms were transforming both how consumers engage with Dr. Oetker and their needs for baking products. As a consequence, Dr. Oetker saw digital platforms as an opportunity for direct consumer touchpoints. Moreover, the firm wanted to expand the scope of its digital offerings to meet changing consumer needs for baking products.

9 Karhu, K., Gustafsson, R., Eaton, B., Henfridsson, O. and Sørensen, C. "Four Tactics for Implementing a Balanced Digital Platform Strategy," *MIS Quarterly Executive* (19:2), June 2020, pp. 105-120.

10 Greiner, L. E., op. cit., May-June 1998.

11 Ibid.

12 Currency conversion rate as of November 2021.

Table 1: Main Initiatives in the Three-Phase Evolution of Dr. Oetker's Digital Platform Strategy

Year	2017-2018	2018-2019	2020 to Present
Phase of Digital Platform Strategy	**Phase 1:** Competing for digital platform ownership	**Phase 2:** Collaborating to own and complement digital platforms	**Phase 3:** Building foundations for cross-platform orchestration
Main Initiatives	Building the *kuchenfreude.de*, *backen.de* and *MBSS* platforms Pivoting in all three initiatives	Cooperating to build *BakeNight* and *BakeTwister* Building *BakerSquare* and complementing platforms within *backen.de*	Creating *AllAboutCake* to coordinate the development of the digital platform strategy Beginning to manage interplays and cross-ecosystem balancing

Three Phases Evolution of Dr. Oetker's Digital Platform Strategy

Dr. Oetker made digital platform strategy a cornerstone of its business strategy. First, it set about identifying and assessing existing or potential digital platforms that might help address consumer needs and then began digital platform initiatives across its business units. As its understanding of the variety of potential digital platforms grew, Dr. Oetker began to develop the managerial practices needed to support a digital platform strategy. These practices were not only appropriate for a single digital platform but also relevant for activities involving several platforms—i.e., orchestrating what is internally known as the "baking ecosystem."[13] As summarized in Table 1 and described below, there were three phases of evolution in Dr. Oetker's digital platform strategy.

Phase 1: Competing for Digital Platform Ownership (2017-2018)

> *"These digital platforms … are actually outside the competences and the channels of what we do today. We can't really bring our marketing expertise to bear, we can't really use our sales team for it and certainly not our own production and supply chains."*
> Head of Corporate Strategy

Compared to born-digital organizations, traditional firms are only half as likely to develop their own digital platform.[14] However, Dr. Oetker built three different platforms: "kuchenfreude.de," "backen.de" and a multibrand specialty-shop platform (abbreviated to MBSS).

Kuchenfreude.de. This platform provided a marketplace for connecting artisan bakeries with consumers who want to buy a hand-made cake. Dr. Oetker established a team to implement and scale the digital infrastructure. However, although the project initially attracted some bakeries, cake consumers either knew an artisan baker in their city from whom they could directly purchase an individual cake or did not have a regular need to return to the platform. Ultimately, the kuchenfreude.de platform was shut down. However, Dr. Oetker learned that there was a consumer need for individualized cakes ordered for special occasions that local artisan bakers could not fulfill at a reasonable price or quality. To enable it to meet this need, the firm acquired deinetorte.de, a start-up that provides the centralized production of individual cakes and an e-commerce website. Although deinetorte.de's centralized production provides economies of scale, and (like kuchenfreude.de) meets a consumer need, it is not a platform as such.

Backen.de. In parallel with the development of kuchenfreude.de, Dr. Oetker set up a dedicated

13 For a description of how ecosystems partly or wholly relate to each other, see Wang, P. "Connecting the Parts with the Whole: Toward an Information Ecology Theory of Digital Innovation Ecosystems," *MIS Quarterly* (45:1b), January 2021, pp. 397-472.

14 Bughin, J., Catlin, T. and Dietz, M. "The Right Digital-Platform Strategy," *McKinsey Quarterly*, May 7, 2019.

team in Germany to develop the *backen.de* digital platform, which was intended to establish a community of consumers engaged in home baking. To speed up the development, and because existing legacy systems were not sufficient given the platform's scope, the team decided to decouple the platform from the existing core IT infrastructure. At that time, however, responsibilities in market territories were still strongly decentralized, and other teams in different subsidiary countries started pursuing ideas similar to backen.de. In response, and in line with the move toward central coordination, the backen.de team decided to adopt a more complex modular infrastructure that could power all consumer community platforms on a global scale. However, this required the team to develop additional capabilities, which slowed down progress on developing backen.de.

In the meantime, internal concerns were raised about the scope of backen.de, which was limited to a recipe-only website. To avoid stalling the initiative completely, a centralized strategy-making unit developed a vision for backen.de as the "home for home bakers." As a result, the backen.de project team pursued efforts to build a digital infrastructure.

MBSS Platform. The MBSS platform was developed in response to the insight that consumers are interested in a marketplace that serves the interests and needs of home bakers.[15] Dr. Oetker set out to build an e-commerce platform on which baking-related firms could offer their products. However, it found that small (and potential) competitors were already operating in that niche in various market territories and decided to acquire several of these firms in countries where it has subsidiaries. After a series of acquisitions, Dr. Oetker set about integrating these companies with one another to build a digital platform. However, the acquisitions differed considerably: some were only brands, while others included their own online shops, offline outlets, logistics and wholesale businesses. Dr. Oetker therefore pivoted[16] the initiative: all firms could retain individual touchpoints with consumers, while Dr. Oetker built a digital infrastructure powering a wholesale e-commerce backbone behind all the different concepts.

Lessons from Phase 1. In the first phase of its digital platform strategy, Dr. Oetker competed and aimed to build its own digital platforms. However, the initiatives struggled to gain traction and Dr. Oetker had to acquire the capabilities needed to build the digital infrastructures for platforms and had to resolve the unclear internal responsibilities between local market territories and central digital platform initiatives. However, the firm learned from these initial experiences and realized that it had to move on from focusing on competing for platform ownership. Dr. Oetker therefore adapted its approach to digital platforms, as now described in Phase 2 of the evolution of its digital platform strategy.

Phase 2: Collaborating to Own and Complement Digital Platforms (2018-2019)

> *"I want to highlight that as a strength. .... Dr. Oetker is not doing this alone, but we're bringing in a partner who somehow has an area of expertise and we're also starting a new platform together."* Head of New Business Development

In Phase 2, the backen.de team started to expand the scope of the project beyond just building its own digital platform to complementing other platforms. The team developed capabilities for offering complements on social media such as Instagram, Pinterest and TikTok, and on other baking recipe platforms. The number of backen.de followers across these various platforms grew with increasing speed. The backen.de team considered its achievements in complementing these platforms as more successful than the efforts to build its own platform. Moreover, learning from past difficulties, the team productively managed its interactions with the various country subsidiaries. In particular, it shared its know-how on complementing other platforms with subsidiaries, leveraged their resources and established a regular exchange of ideas to look for further synergies.

15 This insight might be illustrated by comparing Zalando and Amazon in the clothing category. While Amazon struggles to gain a lasting foothold in that category, Zalando is succeeding by "emotionalizing" the consumer experience. The same could prove true for baking tools and ingredients for home bakers.

16 Pivots are significant shifts over the course of operationalizing a business strategy/business model.

In addition to becoming a complementor on other platforms, Dr. Oetker pursued a new digital platform initiative. This time, a new team was not set up from the outset. Prior to deciding to build a digital infrastructure, the head of new business development validated a minimum viable product. In a two-week sprint, he confirmed the viability of building a digital platform to match passionate bakers who are keen to offer their know-how in baking workshops to aspiring bakers. Before proceeding, however, Dr. Oetker questioned whether it had the digital infrastructure necessary to build such a digital platform. As a result, it partnered with ArtNight, which had scaled a similar concept for painting workshops, to build what became "BakeNight." Thus, Dr. Oetker adopted a cooperation strategy that leveraged ArtNight's know-how to build the digital BakeNight platform.

However, Dr. Oetker was concerned that relinquishing hierarchical control over the digital platform—in particular, the digital infrastructure—posed a risk. The firm was used to owning and controlling the key infrastructure in its linear supply chains. Nevertheless, these concerns were allayed. Dr. Oetker recognized that these resources were unique to building a digital platform in this niche and that developing them itself would require significant, unjustified efforts and include the risk of failure.

In Phase 2, Dr. Oetker also explored the idea of a digital platform that could offer recipes tailored according to an individual's nutritional needs. The business development team worked with PlantJammer, a start-up providing technology to modularize recipes by harnessing machine learning. Together, they developed the idea of "BakeTwister," a digital platform that, first, allows developers to contribute features for baking recipe modularization and, second, enables organizations to incorporate these features into their existing recipe offerings, for example, on mobile applications or websites. Dr. Oetker and PlantJammer wanted to demonstrate that consumers would value such offerings. To test this out, they built a feature to change the ingredients in muffin recipes and offered individualized muffin recipes through the platform. Both partners were able to contribute their resources: Dr. Oetker supplied the know-how for baking processes and PlantJammer provided the technology for recipe modularization. Furthermore, Dr. Oetker began to consider how BakeTwister could contribute to other digital platform initiatives.

Building on consumer insights gained from the BakeNight platform, the idea of "BakerSquare" emerged. Passionate home bakers indicated that they lacked a community of like-minded bakers. Although the number of passionate bakers is relatively small, they are the most loyal consumers of Dr. Oetker products, so building a digital platform for this community presented a business opportunity. Dr. Oetker decided to build a minimum viable product to test the creation of same-side network effects among passionate bakers. To develop the minimum viable product, Dr. Oetker's subsidiary in Finland acquired MBSS and progressed the idea with the cooperation of the headquarters-based new business development unit.

However, different expectations on what a minimum viable product would include began to hinder efforts. Some wanted to build an extensive version of the digital platform that would not only build demand economies of scale by connecting like-minded bakers, but also extend the scope of Dr. Oetker by offering additional digital services to these bakers on the digital platform. Others wanted a more limited solution. In an attempt to resolve this impasse, Dr. Oetker decided it needed additional skills for building the necessary digital infrastructure.

Even so, the BakerSquare initiative faced severe challenges, and the launch date was postponed several times. Furthermore, when the platform was eventually launched, the results were disappointing. Most troublesome was the fact that Dr. Oetker struggled to differentiate whether the lack of interest was due to the way the platform was built or because there was insufficient demand among consumers. Although Dr. Oetker decided to end the BakerSquare initiative, it gained insights into how not to approach internal collaboration.

Lessons from Phase 2. Phase 2 of the evolution of its digital platform strategy provided Dr. Oetker with important lessons. The backen.de initiative showed how to manage the interplay of digital platform initiatives with the core organization, and the BakerSquare initiative showed how not to manage the

interplay. Furthermore, through BakeNight and BakeTwister, Dr. Oetker learned how to collaborate on building digital platforms. During this phase, the firm also began to recognize that either entering partnerships or complementing other digital platforms is preferable to developing its own digital infrastructure for niche digital platforms.

Phase 3: Building Foundations for Cross-Platform Orchestration (2020 to Present)

> *"We started thinking we have to dominate, only to learn we need to cooperate and orchestrate. … Either you decide to cut the baking market into such small niches that you will be the market leader everywhere or you start looking at how industries consolidate across what we call sub-ecosystems. In the latter, we will find our potential to thrive."* Managing Director of AllAboutCake GmbH

In 2020, Dr. Oetker realized that its various and individual digital platform initiatives were not progressing the vision of creating a baking ecosystem. Despite new digital platform initiatives being continually launched and successfully building touchpoints with consumers, these initiatives were operating mostly in isolation.

Moreover, despite the successes achieved in Phase 2, it was a challenge to foster synergies between the digital platform initiatives while avoiding tensions between the initiatives and the core organization. There was no systematic way for Dr. Oetker to leverage resources in a productive interplay that would lead to win-win situations. For example, the developers of the BakeNight platform unsuccessfully tried to leverage Dr. Oetker's strong but scarce marketing resources. Those resources can either be used in the core organization, where they can immediately create value, or to support BakeNight, where they can potentially help the platform reach maturity. However, Dr. Oetker did not have a standardized way of making such decisions.

Furthermore, there was a debate within Dr. Oetker on which of two perspectives was best for realizing the vision of a baking ecosystem. On the one hand, a horizontal perspective viewed a digital platform infrastructure as a set of resources that could be leveraged across several consumer needs. On the other hand, a vertical perspective viewed each niche platform individually to meet a specific consumer need. To help identify the management practices needed to support a digital platform strategy that encompasses multiple platforms, Dr. Oetker decided to create "AllAboutCake GmbH" (AAC). The overall role of this unit is to coordinate the development and implementation of Dr. Oetker's digital platform strategy.

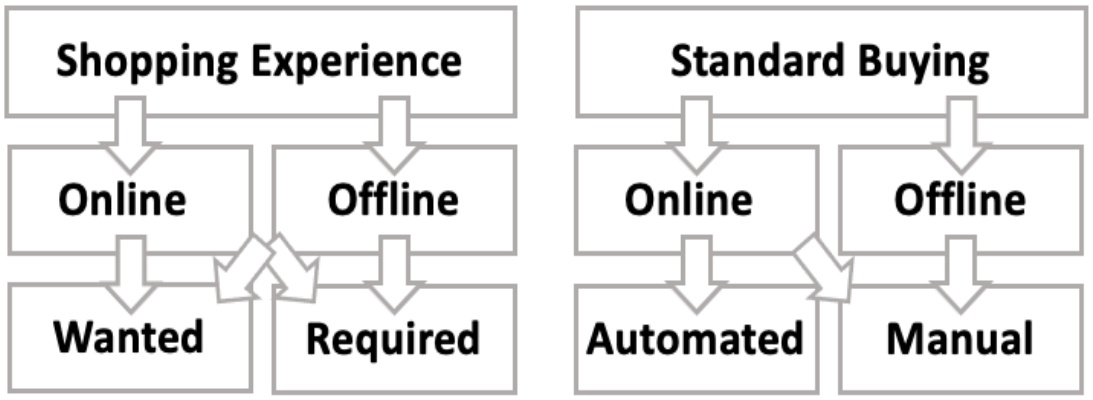
The first task of the AAC was to reduce complexity in the discussion of what the baking ecosystem was about: it split consumer needs according to other digital offerings they overlapped with, such as content, e-commerce and edutainment. These splits were termed sub-ecosystems. The AAC then categorized consumer needs within each sub-ecosystem, such as where and how consumers' purchasing behavior could be split into standard buying (nonemotional; the day-to-day needs related to basic living) and experiential shopping (emotional; the experience of purchasing something consumers crave). Figure 2 provides an example of such a breakdown for the purchasing sub-ecosystem. These sub-ecosystem categorizations meant that Dr. Oetker perceived the baking ecosystem as comprising players able to meet consumers' needs—i.e., a vertical perspective of digital platform strategy.

The sub-ecosystem categorization of consumer needs also led the AAC to realize that digital platform complements may not be universally applicable. Within each sub-ecosystem, some complements were "harder to obtain." Academics refer to these as specific complements that may be unique or help to create network effects.[17] However, there were also more standardized complements that could easily be obtained from various ecosystem participants.

The AAC also took a horizontal perspective for the sub-ecosystems. It decided to assign participants in each sub-ecosystem to one of

17 Jacobides, M. G., Carmelo, C. and Gawer, A., op. cit., March 2018.

Figure 2: Breakdown of Consumer Needs in the Purchasing Sub-Ecosystem



three layers:[18] 1) "touchpoints," who use direct contact to solve consumers' needs; 2) "realizers," who provide specific complements to touchpoints and combine them to create a focal offering; and 3) "enablers," who support both realizers and touchpoints with digital (and nondigital) technology infrastructure resources.

The overall baking ecosystem, as perceived by the AAC, is summarized in Figure 3.

Next, the AAC set out to identify practices for managing the interplay between digital platforms and the core organization. It differentiated between activities on digital platforms intended to "grow the core" (strengthening existing supply economies of scale and scope) and to "expand the network" (developing demand economies of scale and scope).[19]

The process of strategy-making clarified the AAC's understanding of and approach to the digital platform strategy itself. The need for a multitude of digital platforms within the different sub-ecosystems showed the AAC that while Dr. Oetker might strategically own some digital platforms, in most cases, it would be a complementor. This led the AAC to realize that there is no one-size-fits-all approach suitable for digital platforms. Hence, the digital platform strategy must include individual tactics for different digital platforms and provide a way to manage the interplay of the multiple tactics executed in different initiatives. Only by managing the interplay between digital platform initiatives can Dr. Oetker align the initiatives with the sought-after economies of scale and scope.

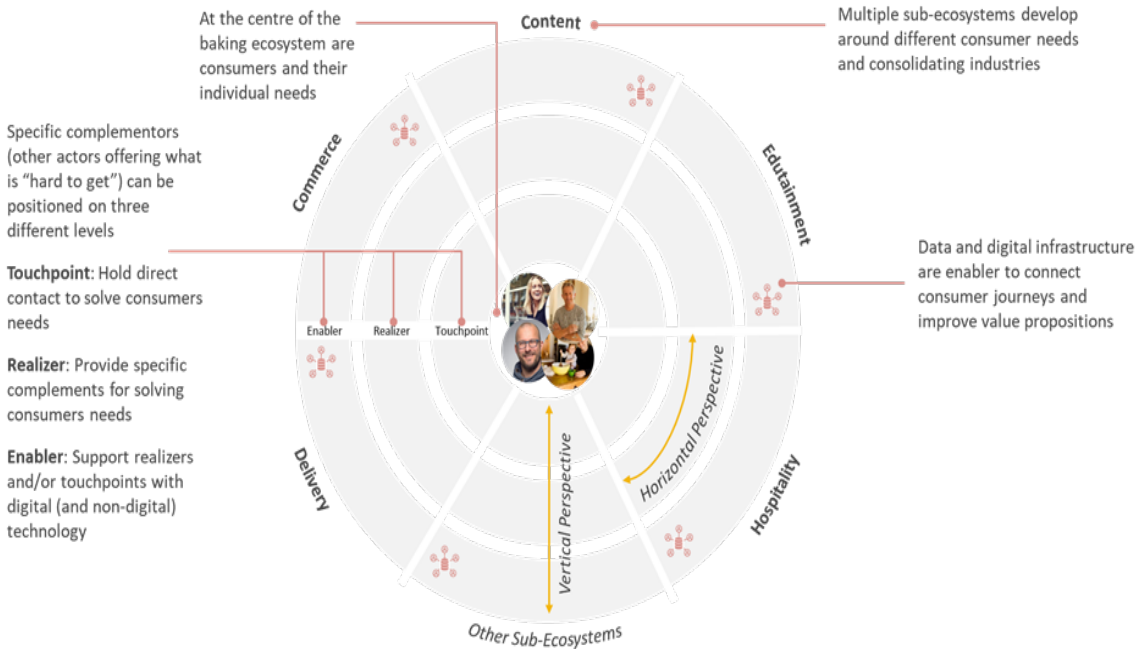
Furthermore, other organizations might also be active in multiple ecosystems that serve consumer needs. In this case, Dr. Oetker must strike a balance between collaborating and competing with these ecosystem participants. For example, an organization might be a complementor of one Dr. Oetker's consumer touchpoints, while Dr. Oetker might also be a complementor to that organization's touchpoint(s) with (other) consumers.

The AAC has identified other management practices for supporting the digital platform strategy. For example, because Dr. Oetker focuses on digital technologies that enable it to simultaneously address multiple consumer needs, cooperating for the supply of technology resources might be a useful practice. This practice could also be valuable as the firm continues its strong focus on building consumer touchpoints. To achieve the optimum balance between its own resources and those provided by complementors, Dr. Oetker has decided to focus on its strengths and collaborate for the rest. It will also focus

18 The AAC's layer split was inspired by The Ecosystem Strategy Map created by Julian Kawohl, founder of Ecosystemizer. For more information, see https://ecosystemizer.com/tools/ecosystem-strategy-map/.

19 This differentiation was adapted from Dietz, M., Khan, H. and Rab, I. *How do Companies Create Value from Digital Ecosystems?* McKinseyDigital, August 7, 2020, available at https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/how-do-companies-create-value-from-digital-ecosystems.

Figure 3: The Baking Ecosystem, as Perceived by the AAC



on strong management of the interplay across ecosystems, especially on balancing the tactics used in different ecosystems. As of 2021, the AAC is operationalizing and further developing all of the above managerial practices for digital platforms.

Lessons from Phase 3. In its attempts to build consumer communities (for example, backen.de and BakerSquare), Dr. Oetker identified its strengths and weaknesses in the area of digital platforms. It discovered that the effort required to build a digital infrastructure for its own digital platform was too high. It therefore developed partnerships with various social media platforms to act as complementors on those platforms with the aim of building a cross-platform community of home bakers and strengthening its existing supply of economies of scale. In doing so, it found that not only social media but also other media companies were, in general, looking to partner with food organizations that could in turn provide resources such as distinct consumer brands or products.

As Phase 3 of the evolution of its digital platform strategy draws to a close, Dr. Oetker has started working on new initiatives that mainly involve cooperation to build digital platforms. Time will tell if the digital platform strategy approach devised by the AAC will be successful. However, the new managerial practices will remain essential for Dr. Oetker's business strategy.

Recommendations for Digital Platform Strategies in Traditional Firms

A traditional firm's digital platform strategy should not focus only on a single platform for that firm. Indeed, not every traditional firm will need to build and launch its own digital platform. But all such firms should develop digital platform practices. Thus, digital platform strategies encompass the different tactics appropriate for various digital platforms, including the role of the firm in each platform (owner vs. complementor) and its modus operandi (cooperation vs. competition). In addition to defining the tactics for different digital platforms, traditional firms' digital platform strategies need to consider the whole cross-platform ecosystem—i.e., management practices for cross-platform orchestration. These practices must not only manage cross-platform interplays with the core

Table 2: Insights from Dr. Oetker on Ensuring that the Digital Platform Strategy Matches the Organizational Stage of Development

Insights from Dr. Oetker	Principle
What worked well: • Having a clear objective for developing touchpoints with end consumers from the outset • Refining the understanding of coopetition in a dedicated digital platform strategy phase **What didn't work:** • Expecting many new digital initiatives to result in owned digital platforms • Launching digital platforms in different departments without sharing experiences	• The clearer you set an objective for digital platform strategy, the clearer is the path for organizational growth • The stronger your firm's past focus was on value chain control, the more seriously you should reflect if this is determining a choice to build platforms

organization but also balance digital platform tactics across ecosystems. The following three recommendations will enable traditional firms to devise a digital platform strategy that meets these aims.

1. Ensure the Digital Platform Strategy Is Consistent with the Stage of Organizational Growth

Traditional firms evolve through various stages of organizational growth. In the case of Dr. Oetker, the organization transitioned from a decentralized delegation stage to the central coordination of activities. Other traditional firms may find themselves in a different stage, for example, collaboration.

At Dr. Oetker, new management practices for digital platforms had to be clarified centrally and communicated to the teams executing the digital platform strategy. Without this step, there might have been duplicated activities, or digital platform initiatives might have been rejected within the organization. To avoid confusion within the wider organization, traditional, incumbent firms should therefore iteratively clarify and reflect on the understanding of the digital platform strategy.

Despite the current trend toward digital platforms superseding conventional supply chains, not every new digital initiative will require a digital platform to be built. Moreover, not every ecosystem will involve a digital platform, nor will one digital platform encompass all relevant ecosystems. Thus, traditional firms will not find a single ecosystem that can respond to all relevant consumer needs but will need to participate in a set of ecosystems (as per the sub-ecosystem concept developed in Phase 3 of Dr. Oetker's strategy evolution).

Unlike conventional supply chains, which involve sourcing standardized resources, digital platforms involve leveraging specific complements and resources. This means that cooperation may have to be an essential component of traditional firms' digital platform strategies because they may no longer be able to own and control the resources. Furthermore, traditional firms need to assess whether it is strategically important to own a digital platform or whether being a complementor on another platform is sufficient. Digital platform strategies should therefore seek to enable cooperative advantage by simultaneously leveraging the firm's own resources and those of complementors.

Initially, because Dr. Oetker was at the centralized coordination stage of organizational development, it struggled to realize cooperation and collaboration are essential components of a digital platform strategy. However, the deliberate focus on building direct consumer touchpoints enabled it to move forward and ultimately develop an organization for collaboration—which may be a starting point for the next stage of organizational revolution—collaboration across the entire organization.

The insights (what worked well and what didn't work) relating to this first recommendation gained from the Dr. Oetker case are summarized in Table 2.

Table 3: Insights from Dr. Oetker on Defining Goals and Structures

Insights from Dr. Oetker	Principle
What worked well: • Establishing the AAC and assigning it the responsibility for cross-platform orchestration • Defining sub-ecosystems to reduce complexity, and aligning different platforms approaches across the sub-ecosystems by differentiating between growing the core or expanding the network **What didn't work:** • Offering little clarification on how and for what goal the digital platforms should align against the backdrop of business strategy • The lack of a dedicated interplay structure meant that resources from the core organization were not leveraged successfully	• The farther away goals for digital platforms shift from the linear supply chains, the more there is a need for deliberate structures for cross-platform orchestration • Identifying sub-ecosystems and clarifying the required economies of scale shapes how to manage the interplay between platforms and with the core organization

2. Define Upfront Goals and Structures for Cross-Platform Orchestration

Digital platforms play an increasingly crucial role in meeting consumer needs. A born-digital organization owns the digital platform at the center of its ecosystem. In contrast, traditional, incumbent firms often control their linear supply chains, and their products may feature in the ecosystems of various platform providers. Incumbent firms therefore need to make sure they have the right structures in place for cross-platform orchestration. Dr. Oetker experimented with different tactics on various digital platforms, but it took over three years to realize that it deliberately needed to create structures for orchestrating cross-platform activities. Hence, we recommend that traditional firms create these structures at the start of their digital platform journeys.

Through establishing the AAC, Dr. Oetker learned that the vision of creating a baking ecosystem could not be realized simply by aligning its digital platforms with each other and with the core organization. The lack of clarity on the interplay between platforms and the core organization resulted in confusion and tensions, as illustrated by the backen.de, BakerSquare, BakeTwister and BakeNight initiatives. Questions that could have been asked to prevent this confusion include: Should (and if so, which) digital initiatives focus on strengthening the existing supply economies of scale (i.e., growing the core) or building demand economies of scale (i.e., expanding the network)? Where and how can digital initiatives extend the scope of Dr. Oetker?

Defining goals and structures upfront will help both with aligning digital platform activities and unlocking resources from the core organization. If a traditional firm wants to develop demand economies of scale, it may choose to own a key digital platform. But if it wants to strengthen existing supply economies of scale, it may choose a more economically viable complementor role that is not crucial for its firm-wide strategic positioning. Regardless of the choice made, traditional firms must clearly state their overall expectations for their digital initiatives. Unspecified or conflicting expectations about desired economies of scale and scope—such as, "growing the core's sales," "building own touchpoints to consumers" and "developing a digital infrastructure"—may well result in unsuccessful initiatives.

However, in line with our first recommendation, the right organizational structure potentially depends on the stage of organizational development a traditional firm has reached. In the case of Dr. Oetker, centralized top-management coordination through the AAC and a focus on demand economies of scale worked well. In other organizations, the structures developed and the goals set may be more decentralized.

Table 4: Insights from Dr. Oetker on Whether to Build Digital Resources or Partner for Them

Insights from Dr. Oetker	Principle
What worked well: • Recognizing the need for partners for BakeNight and BakeTwister, which provided lacking digital infrastructure capabilities • Developing the touchpoint, realizer and enabler layers, as well as vertical and horizontal perspectives of the digital initiatives to assess the need for building new and own resources **What didn't work:** • Starting backen.de on its own without reflecting if it had the required capabilities, and the high effort involved in building an advanced infrastructure • Attempting to build advanced products within cross-department structures in BakerSquare	• The more use cases there are for a digital technology on your digital platforms, the more useful it is to build resources • Partnering is a good starting point for validating which digital platform tactic to pursue, as well as subsequently securing the availability of complements that are "harder to obtain"

If a traditional firm decides to focus its digital initiatives on demand economies of scale, it will need to understand that its traditional value chain might be a hindrance. To unlock demand economies of scale, Dr. Oetker provided those leading digital initiatives with a high degree of entrepreneurial freedom outside of the existing linear supply chains and encouraged them to experiment. However, freedom to experiment may lead to tensions, as illustrated by the backen.de, BakerSquare, BakeTwister and BakeNight initiatives.

Sharing stories of success or failure can help the core organization understand the importance of different digital platform initiatives. Significant pivots in digital initiatives should also be openly communicated within the organization. Dr. Oetker's acquisition of deinetorte.de shows why it is important to test different initiatives to evaluate where platforms can or cannot add value and serve consumer needs. Table 3 summarizes what worked well and what didn't work for Dr. Oetker in defining goals and structures.

3. Decide Which Resources for Operationalizing Digital Platform Tactics to Build and Which to Partner for

Dr. Oetker is aware of how emerging digital technologies are shaping consumer needs. However, building the resources needed to own a digital platform that meets all relevant consumer needs is a lengthy and complex task. Traditional firms therefore need a comprehensive understanding of consumer needs before they can decide whether to develop their own digital platform resources or partner with others. To determine which type of digital platform might meet different consumer needs, the AAC split the needs of consumers into sub-ecosystems, and then assessed where resources and participants might play crucial roles through assigning them to one of three layers—touchpoints, realizers or enablers. For example, in the BakeTwister initiative, building digital platforms for recipe modularization technology is valuable for addressing various consumer needs. Involving partners in the development of such platforms is strategically important and means it is likely to be worth competing with other players who might pursue similar approaches.

Finally, how Dr. Oetker approached its digital initiatives illustrates that executing a digital platform strategy involves developing some, but not all, resources. Moreover, the backen.de initiative, which included activities on social media platforms, highlights a new requirement: the need to balance tactics across ecosystems. Recognizing whether it is better for a firm to build its own digital platform or act as a

complementor to other platforms and whether it is better to do so competitively or collaboratively may change over time. Traditional firms should therefore be prepared to adapt their approaches to balance tactics across ecosystems and recognize that to capture value they may not need to own all the digital platforms.

Concluding Comments

In this article, we describe the evolution of Dr. Oetker's digital platform strategy. Our findings from this case complement those of Karhu et al.,[20] who introduced strategies for platform owners to manage digital platform trade-offs. Our study expands the understanding of digital platform strategy by incorporating the perspective of traditional firms that need to decide whether to own or complement various specific digital platforms.

To thrive in the digital world, we believe that traditional firms, like Dr. Oetker, must have a digital platform strategy. Dr. Oetker's strategy comprises two elements: first, four digital platform tactics that explain how organizations can approach single digital platforms; and second, cross-platform orchestration that manages the interplay between digital platforms and the traditional organizational core and balances tactics across ecosystems (especially collaboration and competition). The insights gained from the Dr. Oetker case, together with our three recommendations, will help businesses that need to develop management practices to support their digital platform strategies.

The process of conducting this study showed us that various questions remain unexplored: How might organizations manage the interplay between digital platform ecosystems in a way that creates reinforcing loops for growing economies of scale and scope between digital platforms and the core organization? How might they assess and evaluate which tactic is best for exploring a specific digital platform opportunity? How might they develop organizational structures to manage an increasing number of tactics and partnerships across ecosystems?

20 Karhu, K., Gustafsson, R., Eaton, B., Henfridsson, O. and Sørensen, C., op. cit., June 2020.

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