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Ready for A(I)nything

Taking Stock of Retailers' Readiness in AA/AI in Germany, Austria, and Switzerland

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Taking Stock of Retailers' Readiness in AA/AI in Germany, Austria, and Switzerland

By Andreas Liedtke, Jessica Distler, Ivan Bascle, Léna Dávid, Inga Flicker, Felix Krüger and Javier Seara

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ACROSS THE BUSINESS LANDSCAPE, advanced analytics (AA) and artificial intelligence (AI)[1] are a growing presence, appearing in forms as varied as recommendation engines and supply chain optimization. It remains to be seen how AA/AI adoption will develop: A global survey by BCG last year found that in Germany, Austria, and Switzerland just 40–50% of companies are running AI pilots, compared to China, for example, where 85% of companies are active in AI (see *Mind the (AI) Gap*, BCG, December 2018). The study also noted that on a global basis, the retail sector is playing a bit of catch-up when compared to other industries around the world—just 48% of retailers in all countries in the survey are active in AI, while sectors such as banking or oil and gas see more than 74% of companies making strides in AI on a global scale.

The numbers paint a picture of low levels of AI activity in retail and fashion brands in Germany, Austria, and Switzerland, but they don't illuminate what lies behind them. We wondered, were DACH companies lacking the right resources or budgets or mind-set to fully leverage AA/AI? To understand these trends better, BCG and Google conducted a joint study to assess the readiness of retailers and fashion brands to exploit the vast benefits of AA/AI and to understand where they are making investments now. We found that competitive advantage was a strong driver—keeping up with peers in DACH—but as we looked deeper, we found other motivations as well. Among them: Retailers and fashion brands are still at the beginning of AA/AI adoption, and there seems to be a lot of upside for this important and latest technical innovation.

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1. *Advanced Analytics (AA)* refers to the systematic computational processing of large sets of input data in order to answer questions about past and future developments. It can generate insights for making decisions and taking action.
Artificial intelligence (AI) refers to a machine-based system that autonomously learns and predicts outcomes by perceiving its environment without relying on hard-coded rules. It can pursue goals, adapt to change, provide information, or take action.

Key Findings

Our study revealed encouraging trends indicating that most fashion brands and retailers in Germany, Austria, and Switzerland are making some degree of progress in preparing for AA and AI. Through our in-depth assessment of their readiness, six key themes emerged:

- **Retailers are growing active, but true readiness remains low.**

- **Food retailing boasts a strong starting position but is challenged by the industry's structural setup.**

- **E-commerce activity and company size are leading indicators of AA/AI readiness.**

- **High investment increases the pressure for outcomes with impact.**

- **Marketing and CRM are catalysts for implementation across the organization.**

- **Use cases driven by business lead to greater readiness.**

RETAILERS ARE GROWING ACTIVE, BUT TRUE READINESS REMAINS LOW
A full 74% of those we surveyed have at least one AA/AI pilot in some stage of progress. Of these companies, 39% have a pilot project started, 35% have already incorporated AA/AI into some processes, and 26% reported widespread adoption across the organization.

This is encouraging data that points toward a growing embrace of AA/AI. However, "being active" is not the same as being ready for AA/AI. "Ready" means being able to efficiently and effectively deploy AA/AI at scale and requires a certain set of capabilities.
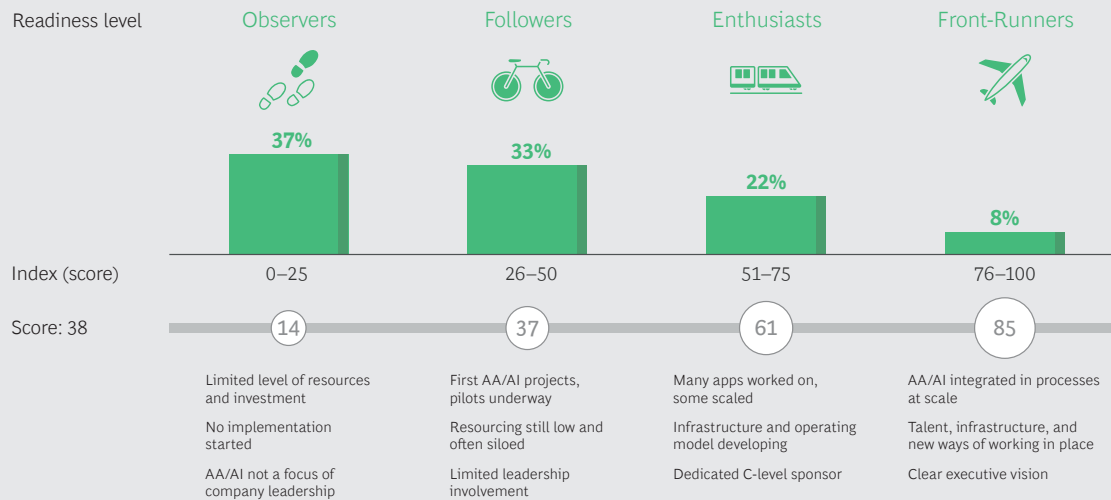
1. **Strategic framing:** Full commitment from leadership who are well educated and aware of AA/AI's potential and its application to their business; prioritization and measurement mechanisms specific to AA/AI; strategic resource allocation

2. **Data and technology:** The right data management, including effective governance and infrastructure

3. **Organization and culture:** Relevant AA/AI operating model; new ways of working, such as agile; leaders and operational heads informed on the AA/AI potential

4. **Talent:** AA/AI talent available inside the company and through external collaboration to fill gaps

5. **AA/AI adoption:** Use cases identified or implemented for adoption at scale and overall AA/AI application maturity

Based on these readiness criteria, we found that 70% of retailers in Germany, Austria, and Switzerland are less than halfway ready (average readiness score < 50). Specifically, 37% of retailers have very little AA/AI activity—we call this group **Observers** (score 0–25)—and another 33%, the **Followers** (score 25–50), are somewhat more advanced (see Exhibit 1). **Enthusiasts**, 22% of respondents, are nearing full readiness, achieving scores of 50–75. Only 8%—the group known as **Front-Runners**—have achieved high to full readiness (score > 75).

When we drill down into the capabilities, even the strongest dimension of readiness, data and technology, still has room for improvement, with a score of just 50. Two others, talent as well as organization and culture, each scored 42, followed by strategic framing (score 39). Adoption, a key factor and effectively the motivation for building up all of the other capabilities, saw the lowest score, 27.

70% of retailers in Germany, Austria, and Switzerland are less than halfway ready.

EXHIBIT 1 | AA/AI Readiness of DACH Retailers and Fashion Companies by Readiness Cohort
> 70% of retailers are less than halfway ready

Readiness level	Observers	Followers	Enthusiasts	Front-Runners
	37%	33%	22%	8%
Index (score)	0–25	26–50	51–75	76–100
Score: 38	14	37	61	85
	Limited level of resources and investment	First AA/AI projects, pilots underway	Many apps worked on, some scaled	AA/AI integrated in processes at scale
	No implementation started	Resourcing still low and often siloed	Infrastructure and operating model developing	Talent, infrastructure, and new ways of working in place
	AA/AI not a focus of company leadership	Limited leadership involvement	Dedicated C-level sponsor	Clear executive vision

Source: BCG & Google AA/AI Readiness Survey, 2019 (N = 97).

FOOD RETAILING BOASTS A STRONG STARTING POSITION BUT IS CHALLENGED BY THE INDUSTRY'S STRUCTURAL SETUP

Across the retail landscape, the food industry may be best positioned to easily realize the benefits of AA/AI. More than most other sectors, it captures a large amount of data on each of its customers through loyalty programs and usually sees high-frequency and repeat purchases, all of which is set against a backdrop of quite stable assortments with large amounts of time series data.
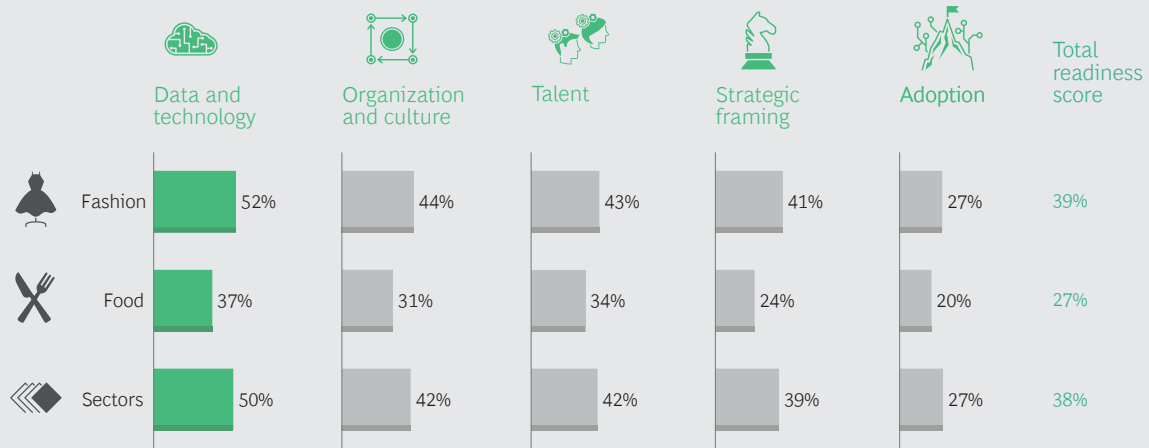
Even so, there are hurdles to overcome. The industry as a whole, with its many physical locations, suffers from being a low-margin business, as well as from certain structural challenges, such as the complexity of its "cooperative," decentralized organizational approach and a concentration of market share in the hands of a few large players with the necessary power and level of sophistication to apply AA/AI at scale. We have also found that advanced marketing and promotion tactics, such as personalized offerings that require the analysis of large data sets, are used to a lower degree than in other retail industries.

Due in large part to these constraints, food businesses score lower than most in every dimension across the readiness scale (average score 27). Food companies make up a very high share of Observers (57%) compared to fashion brands (38%).

We expect this will change soon enough as strong use cases emerge. For example, a European food retailer used AA/AI to improve its key value item pricing. By systematically including consumer value perception, distance to competitors, investment need, and leeway for competitive pricing, the company saw a double-digit increase in sales as well as notable margin uplifts.

EXHIBIT 2 | Dimensional Readiness Score by Retail Sector
Across sectors, retailers score highest in data and technology

	Data and technology	Organization and culture	Talent	Strategic framing	Adoption	Total readiness score
Fashion	52%	44%	43%	41%	27%	39%
Food	37%	31%	34%	24%	20%	27%
Sectors	50%	42%	42%	39%	27%	38%

Note: Percentages represent readiness score per dimension and sector.
Source: BCG & Google AA/AI Readiness Survey, 2019 (N = 97).

E-COMMERCE ACTIVITY AND COMPANY SIZE ARE THE LEADING INDICATORS OF AA/AI READINESS

Many of the Enthusiasts and Front-Runners in the survey indexed higher on e-commerce activity. Separately, larger companies tended to have higher readiness scores as well.

E-commerce drives readiness because the same infrastructure needed for e-commerce—IT infrastructure, data availability, and organizational mind-set and culture—also allow AA/AI to thrive. As such, participants in our study with less than 20% of revenue from e-commerce fell into the Observer category (average score 25), but once e-commerce revenue passes 20%, readiness increases dramatically to an average score of over 50.

But e-commerce is not a prerequisite for AA/AI. Physical retailers can increase readiness by leveraging the vast trove of data they gather through such tactics as point-of-sale systems, loyalty cards, and by pairing transaction data with other data sources, including enhanced product master data.

We also noted that in AA/AI readiness, size counts for a lot, by the sheer fact that it allows for higher investment in terms of budget and resources from a smaller percentage of sales investment. Retailers with annual revenue greater than €1 billion had an average readiness score of 46, investing as much as 14 times the budget and five times the resources of all smaller retailers. However, it's worth noting that in relative terms, smaller companies spend more—2.4% of revenue, compared to larger companies' 0.3%—in part due to the fact that many entry costs are the same, regardless of size.

To avoid being left behind, smaller and medium-sized businesses will need to find ways to counterbalance the resource advantages of competitors. They might consider partnering with other retailers or service providers from within the AA/AI ecosystem—something larger players do as well. A leading global fast-fashion retailer, for example, engages more than six companies to support AA/AI collaborations around consumer behavior prediction, robotics for inventory deployment, inventory tracking, big data management, box volume measurement, and more.

High Investment Increases the Pressure for Outcomes with Impact

Retailers and fashion brands are investing in AA/AI largely to keep up with peers and build competitive advantage through the efficiencies it creates (95% give this reason). But they are also motivated by increased revenue (80% of respondents), cost reductions (53%), and margin improvement (40%). This is driving average investment in AA/AI equal to about 1% of a company's total budget, within range of investment amounts in research and development and marketing.

As we have seen in previous studies, the potential for strong outcomes from AA/AI is high (see *The Dividends of Digital Marketing Maturity*, BCG, September 2019). However, in our survey, participants reported rather modest expected outcomes of 7% revenue uplift, 6% cost reduction, and 5% margin improvement.

We believe retailers and fashion brands may be undervaluing the financial impact AA/AI adoption can drive likely due to the fact that many companies in our survey are still in the pilot stage. Once companies begin implementation of AA/AI, they see much more dramatic results. In BCG project experience with retail companies globally, we have seen outcomes such as the following:

- Markdown management: 15–20% gross margin for goods sold at markdown

- Personalization: 1% revenue uplift in-store and 20% digital

- Digital marketing: 10% cost efficiency increase, 40% cost per transaction efficiency increase

- Customer-centric buying: Approximately 10% increase in EBIT

- E-commerce: 50% increase in online transactions[1]

Notably, 20% of Observers (score 0–25) do not expect any financial impact at all, while all Front-Runners (score > 75) expect financial impact. It is encouraging that, despite room for greater expectations, those that do invest in AA/AI readiness are optimistic about its outcomes, indicating a potential commitment to supporting initiatives. Observers would do well to follow suit or risk a self-fulfilling prophecy: limited investment will reap limited benefits. Ultimately, this could prove fatal for businesses that ignore the AA/AI potential.

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1. *The Dividends of Digital Marketing Maturity*, BCG, September 2019.

MARKETING AND CRM ARE CATALYSTS FOR AA/AI IMPLEMENTATION ACROSS THE ORGANIZATION

For companies eager to find ready on-ramps and early wins, marketing and CRM are natural places to start. Investment here typically leads to sales impact and higher customer satisfaction, and AA/AI initiatives in this area can be leveraged elsewhere, opening doors to other parts of the organization. For example, marketing data from AA/AI can be used to understand demand and optimize the supply chain.

The successful AA/AI journey that BCG sees with clients begins in this way, with a use case that shows high and fast impact, typically of low complexity, generating enthusiasm and buy-in. Successive use cases grow in complexity and impact, with a focus on generating income to "fund the journey" to bigger-ticket topics that may involve more functions, require more complex data, but deliver high returns on a medium-term horizon. In the digital marketing maturity study mentioned above, companies saw that efficiency gains and opportunities in revenue and learning created bridges to other departments.

A vast majority of our survey respondents are already running pilots in marketing and CRM—to be sure, an encouraging sign. But we caution companies to be vigilant about maintaining AA/AI's steady progress beyond marketing and CRM, so that it does not become "siloed."
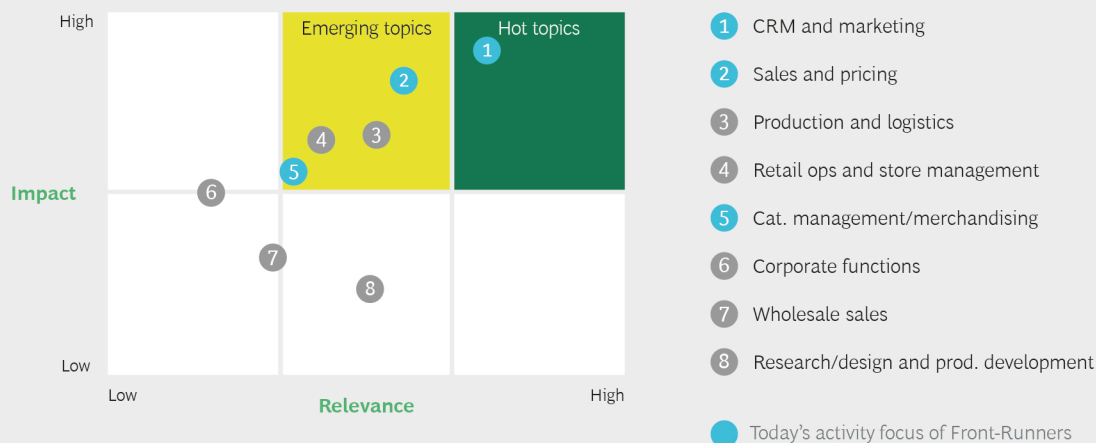
CMOs are often on the forefront of AA/AI and could play a big role here as catalysts who ensure further engagement within the organization.

Indeed, Front-Runners are already building AA/AI applications in other core business areas, such as category management and merchandising, a reflection of their greater understanding of AA/AI as a general driver to reduce costs and increase margin, as mentioned above. Observers, Followers, and Enthusiasts should follow suit, expanding beyond marketing and CRM, where most of their efforts are currently concentrated.

Front-Runners are already building AA/AI applications in other core business areas.

EXHIBIT 3 | AA/AI Hot and Trend Topics
CRM and marketing is the hot topic of the moment—four emerging topics to be watched out for

1. CRM and marketing
2. Sales and pricing
3. Production and logistics
4. Retail ops and store management
5. Cat. management/merchandising
6. Corporate functions
7. Wholesale sales
8. Research/design and prod. development

Today's activity focus of Front-Runners

Q3.1: Which company units do you expect to be impacted by AA/AI applications in the future?
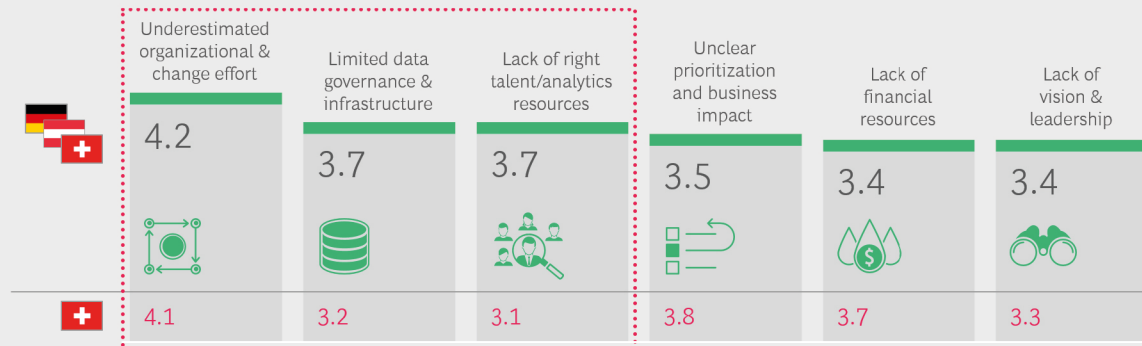**Q3.2:** Please indicate the current or future relevance of the following AA/AI applications for your company.
Note: Adjusted scale.
Source: BCG & Google AA/AI Readiness Survey, 2019 (N = 97).

USE CASES DRIVEN BY BUSINESS LEAD TO GREATER AA/AI READINESS

What else holds retailers back from preparing for full AA/AI potential? Survey respondents ranked their top challenges as: limited ability to effect change across the organization through AA/AI efforts, limited data governance and infrastructure, and a lack of the right talent and analytics resources. However, we believe companies are missing the point: When AA/AI is viewed solely as an IT project, it has lower chances of success. To build AA/AI and roll it out at scale, companies must adopt a business-led approach, characterized by the following:

- Deep business sponsorship

- Use cases driven by business needs

- Data and tech infrastructure and talent need defined by use cases (not the other way around)

- An AA/AI roadmap deeply grounded in company strategy

The data bears out this shortcoming. Observers ranked well enough on talent and data, but the key to success in AA/AI is strategic framing. That is, necessary as they may be, data scientists and IT infrastructure do not alone make for a business strategy. In contrast, Front-Runners don't just lead the industry in all dimensions, they derive their dominant position from a much larger emphasis on strategic framing and AA/AI adoption. They perceive the greatest implementation challenges to be in a lack of prioritizing vision and leadership—not talent or financial resources. Looked at another way: Observers look for IT-dominant solutions partners; Front-Runners want AA/AI partners that consider business implications.

AT A GLANCE

Advanced analytics and artificial intelligence will be key for companies in the coming years and decades. Yet, a 2018 BCG study showed that across the globe, some regions and industries are more prepared for this future than others are; while China is leading, DACH as a region and retail as an industry fall behind. To understand possible reasons, BCG and Google conducted a joint study to examine the readiness of retailers and fashion brands in Germany, Austria, and Switzerland to exploit the benefits of AA/AI.

Competitive Advantages Exist, but an AA/AI Mindset Matters Most

Our survey findings indicate that most companies in DACH are making some progress, but true readiness remains low. Certain conditions put some organizations in a stronger position, such as access to resources that come with size, or an active e-commerce business that has implemented a digital infrastructure. But, mindset matters most, and companies will need to apply a business-led approach to building up AA/AI, if they are to achieve full readiness. Marketing and CRM executives may well lead the way.

The Key Capabilities to Put Companies on Track

 "Readiness" means being able to efficiently and effectively deploy AA/AI at scale and requires a certain set of capabilities, including strategic framing, data and infrastructure, talent, organization and culture, and AA/AI adoption. We provide a path for companies to move up the ladder from active to ready for a future in which AA/AI powers success and drives competitive advantage.

Without a business-led mind-set, retailers and fashion brands could risk AA/AI efforts being siloed, a failed opportunity that could mean losing market share to those with better strategy and momentum in AA/AI that would be hard to regain.

GETTING STARTED: ACHIEVING AA/AI EXCELLENCE

Retailers can move up the ladder of AA/AI excellence, from Observer to Front-Runner, with a focus on the five capabilities used to determine readiness: strategic framing, data and infrastructure, talent, organization and culture, and AA/AI adoption.

Strategic framing: Move from occasionally involving top-level leadership in AA/AI discussions to developing a coherent executive AA/AI vision and strategy that maps a self-funding journey and includes dedicating a top management sponsor to select topics.

Data and infrastructure: Evaluate what kind of data is required and where it is located in order to subsequently either acquire the right data or set up the necessary data pipeline for the specific use case. This is particularly important in the retail industry as use cases often require real-time data to bring the desired impact (think product recommendations) of the application.

Talent: Begin with a nucleus team, then expand to a company-wide talent acquisition plan, backed in the end with widespread efforts to continue developing AA/AI expertise. Introduce new aspects to old ways of working, transitioning toward agile modes on a project basis that will eventually roll out throughout the organization.

Organization and culture: Invest heavily in change management to support employees in giving away control to algorithms, and make sure teams are set up to receive the change and embrace their new duties. Without this approach, a company could make a substantial investment in becoming a data-driven organization, but if IT, operations, and related business resources don't know how to work with one another or know what is expected of them, chaos can develop, negatively impacting the return on investment.

AA/AI adoption: A step-by-step approach is best. Launch a pilot project that yields quick and visible results, and follow this up with use cases that successively grow in complexity until AA/AI implementation at scale is achieved. Each use case should build upon the last, with longer-term results visibility—but larger impact in return.

Retail and fashion brands in Germany, Austria, and Switzerland are showing promising moves toward AA/AI. But more effort is still needed to build readiness. By continuing to develop AA/AI talent, build data and tech infrastructures, and the right organizational setup, retailers can begin to see AA/AI have a transformative impact on their business.

Retail and fashion brands in Germany, Austria, and Switzerland are showing promising moves toward AA/AI.

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