On the Pulse of Digitalization
Deloitte Digital Maturity Index
Taking the Pulse of Digitalization

A VISION OF A FULLY DIGITALIZED COMPANY:
Human, machine and product communicate in real time across all operating units. The ecosystem of suppliers, research facilities, competitors and customers is integrated. Continuous data transparency enables risk minimization at an early stage.

At the same time, agile production systems facilitate cost-effective manufacturing of customized products within short lead times.

To turn this into your reality, our Digital Maturity Index (DMI) – jointly developed by Deloitte and the University of Duisburg-Essen – marks the starting point of your digital transformation. The Deloitte DMI is the result of a standardized approach so as to derive a digital maturity level as well as possible fields of action on your path to a digital business model.

“The combination of Digital Factory experience and results from our new Digital Maturity Assessment enable us to generate comprehensive best practices. We are able to show in detail why some companies are more successful on their digital journey than others.”

DR. HARALD PROFF,
LEAD PARTNER OPERATIONS
This is an augmented reality compatible brochure.

To access further content please:
1. Download the Snoopstar App
2. Search for this icon in the brochure
3. Activate the app and place your smartphone in front of the page
4. Be amazed!
The results indicate a strong linkage between a company’s digital maturity and EBIT impact. Participants experience EBIT impact through digital investments in new business models & services, value chains & digital capabilities, and products, services & platforms. Key improvement areas on the road to digital maturity are digitalization of business functions, new digital business models, and operational activities avoiding the strategic component. It is key to focus on the left path and lead to success only when both are improved equally. Survey findings at a glance show that along these two dimensions, companies are clustered into six digital archetypes, focusing on strategic and operational activities with significant success, strategic activities avoiding the operational component, operational activities avoiding the strategic component, and strategic and operational activities with minimal or no evident success. New digital business models and digitalization of products and services have minimal or no evident success. Digital maturity never depends on diligence or digital journey duration, but a necessity to stay in business – so leapfrog ahead! Ten years from now digitalization will not be a key differentiator, but a necessity to stay in business – so leapfrog ahead!
“The crucial aspect for a decision on digital transformation [...] is the economic benefits, instead of just evaluating technical options.”

CFO, AUTOMOTIVE 1ST TIER
Key determinants for strong EBIT uplift

Adapting value chains and process models will have a lower EBIT impact than switching to new business models.

- 25% of the participants invest in new digital business models & services and culture.
- 40% of the participants invest in the digitalization of products and services, along with assets and platforms.
- 35% of the participants invest in the digitalization of value chains and digital capabilities.
Digital efforts along **strategic vs. operational indices**

Digitalization in its early stages is driven by fragmented, process-oriented development and increasingly focuses on strategy to achieve digital maturity.

**STRATEGIC INDEX**
Companies that are characterized by strategic activities due to digitalization of products and services as well as the definition of new digital business models. Leading companies create complex digital ecosystems to achieve new services for their clients.

**OPERATIONAL INDEX**
Companies can be characterized by a strong ability to operationalize a digital strategy considering their core value chain and available resources. Leading companies build upon digital capabilities, set up IT backbones and increase the intelligence of their business functions.

The shift in digitalization efforts along the maturity levels is clearly visible. Advanced companies increasingly focus on products and business models instead of improving their core value chain.
Six digital archetypes

Analysis along the strategic and operational indices results in the definition of six digital archetypes that are characterized by different digitalization approaches.

**Characteristics and distribution per digital archetype**

- **Champions (40%)**: Champions combine consistent digital strategy with operational excellence to achieve a flexibility advantage.
- **Potentials (8%)**: Potentials focus on developing their digital strategy hand in hand with operational excellence to achieve cost advantages.
- **Innovators (33%)**: Innovators show distinct advances in digital business through an innovative portfolio but average operational success.
- **Operators (5%)**: Operators focus on digitalizing their core value chain, founding their success upon flexibility through innovative solutions.
- **Followers (8%)**: Followers seek to consistently advance digital skills in both index dimensions. Prepare to transition into next archetype.
- **Laggards (7%)**: Laggards lack digital skills in both index dimensions using digitalization to improve overall efficiency.
Champions and Potentials show that success is not a matter of diligence – but a matter of doing it right.

Innovation-driven companies are quite new to digitalization – but think big.

Operators are taking the rocky road.

Followers and Laggards have not yet found the key to digital success – regardless of the duration of their journeys.
Time is not decisive for digitalization success

Invested time is not decisive for successes or setbacks in digitalization, but it shows that digitalization is a longstanding presence in most companies when it comes to deciding on their future path.

Most successful companies started their digitalization two years ago, process-driven companies tend to take longer.

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2014</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Champions</td>
<td></td>
<td>60%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Potentials</td>
<td>13%</td>
<td></td>
<td>55%</td>
<td>10%</td>
</tr>
<tr>
<td>Innovators</td>
<td>11%</td>
<td>22%</td>
<td>44%</td>
<td>22%</td>
</tr>
<tr>
<td>Operators</td>
<td>14%</td>
<td>57%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Followers</td>
<td>12%</td>
<td>21%</td>
<td>58%</td>
<td>9%</td>
</tr>
<tr>
<td>Laggards</td>
<td>17%</td>
<td></td>
<td>50%</td>
<td>33%</td>
</tr>
</tbody>
</table>
Digital archetypes vary in terms of **business impact**

Digital archetypes with a mature strategic index show a significant revenue uplift; only for Champions and Potentials is this reflected by a corresponding EBIT increase. Operators translate core value chain performance into comparatively high EBIT impact.

**Insights**

1. **Champions** and **Potentials** are capable of increasing not only their revenue, but also their EBIT, since they are able to optimize both the operational and strategic indices through digitalization.

2. Innovators primarily drive innovation, resulting in revenue uplift of up to 20%. However, they fail to translate this into an equivalent EBIT impact, a phenomenon that is potentially due to a less performing supply chain.

3. Operators focus on their process model rather than product portfolio. Although they achieve comparatively less revenue uplift (16%) they manage to translate their high-performing value chain into significant EBIT uplift (13%).

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**AVERAGE EBIT UPLIFT**

- **Champions**: 16.2%
- **Potentials**: 13.6%
- **Innovators**: 7.8%
- **Operators**: 12.5%
- **Followers**: 5.6%
- **Laggards**: 1.3%

**AVERAGE REVENUE UPLIFT**

- **Champions**: 38.5%
- **Potentials**: 25.7%
- **Innovators**: 20.0%
- **Operators**: 15.6%
- **Followers**: 9.7%
- **Laggards**: 1.2%
“Due to the complexity of the transformation, partnerships are a critical success factor.”

CTO, AUTOMOTIVE OEM
Digital Maturity is key to achieving financial success

Champions & Potentials are benefiting from focusing on strategic and operational components, which have a notable financial impact, while Followers & Laggards have improvement needs in both components.

**Digital investment increased by**
- Champions & Potentials: 60%
- Followers & Laggards: 19%

Champions & Potentials say their digital investment increased ~3x more than for Followers & Laggards.

**STRATEGIC COMPONENT**

<table>
<thead>
<tr>
<th>DIGITAL ARCHETYPES</th>
<th>CHAMPIONS</th>
<th>POTENTIALS</th>
<th>FOLLOWERS</th>
<th>LAGGARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue increased by</td>
<td>27%</td>
<td>8%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>EBIT uplifted by</td>
<td>14%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Champions & Potentials have a ~3x higher revenue impact than Followers & Laggards.

Champions & Potentials have a ~3x higher EBIT impact than Followers & Laggards.

**OPERATIONAL COMPONENT**

<table>
<thead>
<tr>
<th>DIGITAL ARCHETYPES</th>
<th>CHAMPIONS</th>
<th>POTENTIALS</th>
<th>FOLLOWERS</th>
<th>LAGGARDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time-to-market time decreased by</td>
<td>14%</td>
<td>5%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>O2D time decreased by</td>
<td>22%</td>
<td>10%</td>
<td>5%</td>
<td>5%</td>
</tr>
</tbody>
</table>

Champions & Potentials decrease time-to-market 3x more than Followers & Laggards.

Champions & Potentials decrease O2D – 2x more than Followers & Laggards.

**Productivity increased by**
- Champions & Potentials: 19%
- Followers & Laggards: 7%

Champions & Potentials increase productivity ~2x more than Followers & Laggards.
The Champion’s DNA

Champions focus on strategic as well as operational activities, adapting outstandingly to demand shifts and benefitting from operational excellence.

Did you know what share of companies deems the following aspects to be part of their value proposition?

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>83%</td>
</tr>
<tr>
<td>Flexibility</td>
<td>67%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>50%</td>
</tr>
<tr>
<td>Innovation</td>
<td>50%</td>
</tr>
<tr>
<td>Time</td>
<td>33%</td>
</tr>
<tr>
<td>Cost</td>
<td>17%</td>
</tr>
</tbody>
</table>

**STRATEGIC INDEX**
- Monitor new technologies
- Identify business opportunities
- Ability to adapt
- Investment in new digital assets
- Extensive partner collaboration

**OPERATIONAL INDEX**
- Transformation roadmap
- Integrated central IT system
- Data collection & analytics
- Digital scorecard
- End-to-end digital supply chain
The Potential’s DNA

Potentials focus on developing digital strategy hand in hand with operational excellence to achieve cost advantages.

Did you know what share of companies deems the following aspects to be part of their value proposition?

**Quality**: 75%

**Efficiency**: 50%

**Innovation**: 48%

**Flexibility**: 44%

**Cost**: 33%

**Time**: 13%

**Operational Index**

- **81%**: Monitor new technologies
- **88%**: Identify business opportunities
- **83%**: Ability to adapt
- **83%**: Investment in new digital assets
- **85%**: Extensive partner collaboration

**Strategic Index**

- **81%**: Transformation roadmap
- **92%**: Integrated central IT system
- **73%**: Data collection & analytics
- **88%**: Digital scorecard
- **77%**: End-to-end digital supply chain

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*DIGITAL ARCHETYPES | DELOITTE DIGITAL MATURITY SURVEY*
Comparison: Champions vs. Potentials
Champions primarily differ in terms of strategic activities that permit leapfrogging ahead of Potentials

Champions distinguish themselves by

- Monitoring new technologies and adapting to changing market requirements.
- Having an improved governance structure that provides the necessary support for digitalization.
- Making more investment decisions to merge internal and external assets on collaborative platforms.
- Carrying out a thorough integration of all relevant IT systems, such as ERP and MES.
- Identifying new technologies and business opportunities to develop innovative products/services.
The Innovator’s DNA

Innovators place a focus on strategic activities, but compared to Champions, they seriously lack capabilities in the field of process digitalization.

Did you know what share of companies deems the following aspects to be part of their value proposition?

<table>
<thead>
<tr>
<th>Strategic Index</th>
<th>Operational Index</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quality</strong></td>
<td><strong>Transformation roadmap</strong></td>
</tr>
<tr>
<td>73%</td>
<td>73%</td>
</tr>
<tr>
<td><strong>Innovation</strong></td>
<td><strong>Integrated central IT system</strong></td>
</tr>
<tr>
<td>45%</td>
<td>36%</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td><strong>Data collection &amp; analytics</strong></td>
</tr>
<tr>
<td>36%</td>
<td>18%</td>
</tr>
<tr>
<td><strong>Flexibility</strong></td>
<td><strong>Digital scorecard</strong></td>
</tr>
<tr>
<td>27%</td>
<td>56%</td>
</tr>
<tr>
<td><strong>Cost</strong></td>
<td><strong>End-to-end digital supply chain</strong></td>
</tr>
<tr>
<td>27%</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Time</strong></td>
<td><strong>Monitor new technologies</strong></td>
</tr>
<tr>
<td>0%</td>
<td>64%</td>
</tr>
<tr>
<td><strong>Identify business opportunities</strong></td>
<td><strong>Investment in new digital assets</strong></td>
</tr>
<tr>
<td>64%</td>
<td>82%</td>
</tr>
<tr>
<td><strong>Ability to adapt</strong></td>
<td><strong>Extensive partner collaboration</strong></td>
</tr>
<tr>
<td>82%</td>
<td>64%</td>
</tr>
</tbody>
</table>

**DIGITAL ARCHETYPES**

**DELOITTE DIGITAL MATURITY SURVEY**

**DIGITAL ARCHETYPES**
At an early stage, the typical Innovator focuses on strategic development; operational activities become important to achieving Potential status.

How to move from Innovator ...

- Definition of a digital roadmap and centrally managed transformation.
- Investment decisions to merge internal and external assets on collaborative platforms.
- Identification of new technologies and business opportunities to develop innovative products/services.

... to Potential?

- Full digitalization of the end-to-end supply chain (i.e., logistics).
- Mitigation of efficiency vs. flexibility conflicts between traditional and new business models.
- Collection of real-time data from internal & external data sources to conduct extensive data analytics.
The **Operator’s DNA**

In contrast to Innovators, Operators focus on the digitalization of processes, neglecting the strategic activities that enable a company to become a Champion.

Did you know what share of companies deems the following aspects to be part of their value proposition?

- **Quality**: 90%
- **Flexibility**: 50%
- **Innovation**: 40%
- **Efficiency**: 10%
- **Cost**: 10%
- **Time**: 0%

<table>
<thead>
<tr>
<th>Strategic Index</th>
<th>Operational Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>30% Monitor new technologies</td>
<td>60% Transformation roadmap</td>
</tr>
<tr>
<td>50% Identify business opportunities</td>
<td>70% Integrated central IT system</td>
</tr>
<tr>
<td>50% Ability to adapt</td>
<td>50% Data collection &amp; analytics</td>
</tr>
<tr>
<td>60% Investment in new digital assets</td>
<td>50% Digital scorecard</td>
</tr>
<tr>
<td>40% Extensive partner collaboration</td>
<td>70% End-to-end digital supply chain</td>
</tr>
</tbody>
</table>
Operators are characterized by a high degree of process digitalization - to become a Potential, the creation of innovative products and services is key.

How to move from Operator...
Implementation of a cost optimal value chain, focusing on cost drivers procurement and manufacturing.

... to Potential?
Intensive monitoring of digital journey (scorecard) and quantification of sustainable business cases.

Collection of real-time data from internal and external data sources to conduct extensive data analytics.

Establishment of completely new value chain and innovative business models.

Initial monitoring of digital journey (scorecard) and quantification of sustainable business cases.

Change of value proposition - higher adaption ability during shifts in demand.
The Follower’s DNA

Followers seek to consistently advance digital skills in both index dimensions and prepare to transition into the next archetype.

Did you know what share of companies deems the following aspects to be part of their value proposition?

<table>
<thead>
<tr>
<th>Strategic Index</th>
<th>Operational Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monitor new technologies</td>
<td>Transformation roadmap</td>
</tr>
<tr>
<td>Identify business opportunities</td>
<td>Integrated central IT system</td>
</tr>
<tr>
<td>Ability to adapt</td>
<td>Data collection &amp; analytics</td>
</tr>
<tr>
<td>Investment in new digital assets</td>
<td>Digital scorecard</td>
</tr>
<tr>
<td>Extensive partner collaboration</td>
<td>End-to-end digital supply chain</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Quality</th>
<th>Innovation</th>
<th>Efficiency</th>
<th>Flexibility</th>
<th>Time</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>77%</td>
<td>49%</td>
<td>30%</td>
<td>30%</td>
<td>19%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Operational Index

- Monitor new technologies
- Ability to adapt
- Investment in new digital assets
- Extensive partner collaboration
- Transformation roadmap
- Integrated central IT system
- Data collection & analytics
- Digital scorecard
- End-to-end digital supply chain

Strategic Index

- Monitor new technologies
- Ability to adapt
- Investment in new digital assets
- Extensive partner collaboration
- Transformation roadmap
- Integrated central IT system
- Data collection & analytics
- Digital scorecard
- End-to-end digital supply chain
The Laggard’s DNA

Laggards lack capabilities in all fields and fall behind the competition in terms of digitalization activities.

Did you know what share of companies deems the following aspects to be part of their value proposition?

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality</td>
<td>78%</td>
</tr>
<tr>
<td>Efficiency</td>
<td>44%</td>
</tr>
<tr>
<td>Flexibility</td>
<td>33%</td>
</tr>
<tr>
<td>Innovation</td>
<td>11%</td>
</tr>
<tr>
<td>Time</td>
<td>0%</td>
</tr>
<tr>
<td>Cost</td>
<td>0%</td>
</tr>
<tr>
<td>Monitor new technologies</td>
<td>22%</td>
</tr>
<tr>
<td>Identify business opportunities</td>
<td>22%</td>
</tr>
<tr>
<td>Ability to adapt</td>
<td>33%</td>
</tr>
<tr>
<td>Investment in new digital assets</td>
<td>33%</td>
</tr>
<tr>
<td>Extensive partner collaboration</td>
<td>22%</td>
</tr>
<tr>
<td>Transformation roadmap</td>
<td>22%</td>
</tr>
<tr>
<td>Integrated central IT system</td>
<td>44%</td>
</tr>
<tr>
<td>Data collection &amp; analytics</td>
<td>33%</td>
</tr>
<tr>
<td>Digital scorecard</td>
<td>11%</td>
</tr>
<tr>
<td>End-to-end digital supply chain</td>
<td>56%</td>
</tr>
</tbody>
</table>
Exchanging data relating to products & services with groups such as clients or other companies.

Having increased openness towards a digital culture, but solely in isolated company functions.

Having continuous development of new customer solutions and business models.

Having a CEO and top managers on all hierarchy levels who offer support concerning the digital journey.

Exerting influence on the size and composition of the cooperation network.

Comparison: Followers vs. Laggards
Followers differ from Laggards in terms of strategic activities that eventually permit further movement towards a strategic or operational direction.
Ten years from now, today’s differentiators become an imperative, so companies do best in moving along the strategic and operational direction quickly.

Follow our ‘Leapfrog Recipes’ to become a Champion:

**Potential:**
- Transition roadmap
- Digital scorecard
- Responsive organization

**Innovator:**
- E2E supply chain digitalization
- Real-time data collection & analytics
- Partner network
- Digital scorecard
- Adaption ability

**Operator:**
- Partner network
- Digital scorecard
- Adaption ability

**Follower:**
- Digital roadmap
- Clear sponsorship
- Sensing new opportunities

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Digital *recipe for championship* – how to get there?
Industries vary in digital maturities

Industries are ranked according to their Digital Maturity Index Score.

Industrial Products and Service Providers are most advanced in terms of digitalization.
Industrial Products (IP) vs. Automotive

Comparing leading versus lagging industries, it becomes clear that the ways to move into the Champions cluster differ significantly.

Top five improvement needs for Followers & Laggards within

<table>
<thead>
<tr>
<th>Industrial Products</th>
<th>Automotive</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 Digitalize E2E supply chain (i.e., procurement processes)</td>
<td>Conduct data analytics using real-time data</td>
</tr>
<tr>
<td>#2 Monitor and adapt innovations of competitors and suppliers</td>
<td>Raise acceptance of digital culture</td>
</tr>
<tr>
<td>#3 Introduce incentives system to scale</td>
<td>Perform data analytics</td>
</tr>
<tr>
<td>#4 Report digitalization progress by determined scorecard</td>
<td>Improve knowledge management</td>
</tr>
<tr>
<td>#5 Develop entrepreneurial culture among employees</td>
<td>Mitigation of efficiency vs. flexibility conflicts</td>
</tr>
</tbody>
</table>
About the participants

A majority of participants is located in two main industries while having a more mature age group holding middle management positions.

Participants by industry

- Industrial Products: 40%
- Transportation, Logistics: 20%
- Pharma, Chemicals, Plastics: 20%
- Engineering Services: 12%
- Automotive: 8%

>50% of all participants work in the TOP 2 industries.

Participants by age

- <34: 5%
- 35-44: 24%
- 44-54: 37%
- 55-64: 34%

71% of participants are over 45 years old.

Participants by revenue

- <1000K: 15%<br> - 10K-20K: 7%<br> - >20K: 27%
- 1K-10K: 52%

Participants by position

- CxO Level: 25%

25% of participants are on a CxO level.

Participants by # of employees

- <1000K: 15%
- 1K-10K: 52%
- >10K: 27%
- 10K-20K: 7%
Digital Maturity Index enables transformation

To identify differences in digital potentials, we developed the Digital Maturity Index, offering a standardized approach so as to derive a digital maturity level.

The Digital Business Index measures the company’s orientation toward gaining competitive advantages. This enables greater competitive advantages and higher revenues in existing and new markets.

Dynamic Capabilities determine the company’s ability to change and support the development of skills when they are disrupted by changes in the environment, threatening competitive advantages.

The Digital Activity Index measures the company’s ability to operationalize a digital strategy along two dimensions, taking into account available resources.

The Digital Capability Index measures the potential, capabilities and knowledge of internal resources along the two dimensions of organizational and individual capabilities.
Our Digital Factory accompanies the digital journey

An innovative environment in which you assess your digital maturity and develop digital business models to unleash the full potential of digitalization.

DIGITAL VISION
Definition of a holistic, long-term vision as an aspirational goal for the journey

DIGITAL MATURITY ASSESSMENT
1. Set the scene
2. Break down vision into targets
3. Identify key improvement areas

DIGITAL ROADMAP
Gap evaluation, digital business case and prioritization of improvement areas

DIGITAL OPERATING MODEL
Investor-driven, agile, and insight-driven structure for digital roadmap execution

SCALE UP
Roll out verified solutions to corporate level in order to leverage full potential
Our DMI team is dedicated to supporting you along your individual digital transformation journey.

For more information please visit:
www.deloitte.com/de/digital-maturity.html
digitalfactory@deloitte.de

**Dr. Harald Proff**  
Partner  
Phone: +49 (0)211 8772 3184  
hproff@deloitte.de

**Claudia Ahrens**  
Director  
Phone: +49 (0)40 32080 4829  
cahrens@deloitte.de

**Yvonne von Ostrowski**  
Manager Digital Factory  
Phone: +49 (0)211 8772 3070  
yvonostrowski@deloitte.de

**Wencke Neuroth**  
Senior Consultant  
Phone: +49 (0)211 8772 2810  
wneuroth@deloitte.de