Prepare Finance for Digitalization
The digital enterprise
The digital enterprise

- **Product**
  - Using data and technology to enhance existing products and services
    - Automated data discovery
    - Smart sensors
  - User-customized products
  - Open platforms

- **Customer service**
  - Improving channel coordination and performance
    - Mobile customer service
    - Social customer service
  - Transforming channels to match customer behaviors and preferences
    - Just-in-time customer service

- **Functional operations**
  - Improving productivity or optimizing enterprise activities and processes
    - Digital workplace
    - Dynamic resource reallocation
  - Predictive analytics
  - Robotic process automation

- **Launching new products or services beyond the core portfolio**
  - Serving cars, not selling cars
  - Selling "wellness," not medical treatment

- **Making broad improvements in one or more functions**
  - Continuous accounting
  - Supply chain digitization

**Enhancement**  **Scope of change**  **Transformation**
All organizations are becoming digital

Ranking of technology as a key driver of organizational success

Leaders see urgency of digitalization
Percentage of senior leaders

67% believe their organization must become significantly more digitized

Digitization is how organizations exploit all sources of data and technology to: create and enhance products and services; boost employee productivity through collaboration and insight from data; enable new and more efficient operations, processes and channels.

What else you might hear: Digitalization, Digital Strategy

Source: IBM Institute for Business Value

Source: Gartner Digital Enterprise 2020 Survey

n = 578 leaders
### What digitization means

**Implications of the digital enterprise**

<table>
<thead>
<tr>
<th>Products become information-rich services</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Identify service opportunities to deliver more, low-effort customer experiences.</td>
</tr>
<tr>
<td>- Capture and store more customer data.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data reliance deepens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make smarter use of data (at your disposal) to drive faster decisions.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Work adapts to broader role for machines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use more automation opportunities to increase team productivity.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Everything accelerates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implement technology solutions faster by reducing the governance burden and other bureaucracy.</td>
</tr>
</tbody>
</table>

**Required capabilities to cope with digital needs**

- Digital mindset
- Data analytics and science
- Technology
- Agile thinking
Digitization opportunities

- Operations: 49%
- Customer Service: 34%
- Sales: 31%
- Marketing: 30%
- Logistics: 25%
- IT: 23%
- Financial Management: 19%
- R&D/Product Development: 11%
- Manufacturing: 11%
- HR Management: 10%
- Procurement: 6%

n=578 leaders
Source: Gartner Digital Enterprise 2020 Survey
Note: Multiple responses were allowed
Digital ambition

Current vs. Forecasted Implementation of Digital Technologies in Accounting

Percentage of Companies Implementing

Digital Technologies

- Artificial Intelligence
  - 2018: 4%
  - 2020: 53%
- Blockchain
  - 2018: 2%
  - 2020: 24%
- Robotic Process Automation
  - 2018: 49%
  - 2020: 85%

Source: Gartner
Digital-ready data
Financial data is losing relevance

The expected gap between financial and enterprise data strategies in 2020

- Finance as a digital data domain
- Data relationships replace structure
- Speed of strategy execution
  - Cloud-based applications
  - Empowered end users
  - New sources of unstructured data
- On-premises applications
- Finance as an "advisor"
- Augmented structured data

- Financial data is the primary data set
- Reporting is controlled and distributed
- Data is structured with focus on comparative history
- Movements in financial statements drive analysis

Source: Gartner
What’s advanced about advanced data?

Finance’s analytics options
By data complexity and level of specialized analytics knowledge required

<table>
<thead>
<tr>
<th>Advanced analysis of financial data</th>
<th>Advanced analysis of integrated data</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Dynamic project DCF simulations</td>
<td>• Predictive performance analytics</td>
</tr>
<tr>
<td>• Machine-learning generated forecasts</td>
<td>• Scenario and simulation analysis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Traditional finance analysis</th>
<th>Basic nonfinancial analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Static project return analysis</td>
<td>• Functional analysis</td>
</tr>
<tr>
<td>• Trend-based forecasting</td>
<td>• Strategic analysis</td>
</tr>
</tbody>
</table>

Source: Gartner
Focus on data standardization

Finance IT maturity attributes that drive increased finance technology ROI
Percentage of finance executives using each process, leaders vs. everyone else

<table>
<thead>
<tr>
<th>Process</th>
<th>Finance technology leaders</th>
<th>Everyone else</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conducting periodic audits to measure compliance with data standards</td>
<td>63%</td>
<td>24%</td>
</tr>
<tr>
<td>and identifying sources of noncompliance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ensuring that data fed into finance IT systems is high-quality</td>
<td>63%</td>
<td>20%</td>
</tr>
<tr>
<td>Assigning responsibility for data integrity on a process-by-process</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>basis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Having common enterprise data standards for all “critical” data</td>
<td>58%</td>
<td>53%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>27%</td>
</tr>
</tbody>
</table>

Data standardization is a critical enabler of finance technology success.

High-quality data drives return on finance technology investments, but without strong standardization, finance executives are faced with a “garbage in, garbage out” scenario when analyzing data.

n = 114 finance executives
Source: Gartner (2016).
Note: “Finance technology leaders” are organizations that achieve top-quartile current and future-anticipated return on finance technology investments.
New approach: Using data lakes to drive financial data integration

Data integration model

- Call center
- Demographics
- Campaign metrics
- Social media
- Affinity groups
- External partners

A: Non-summarized transactions
B: Finance-created data elements
   - Transactional level
   - Parent/child; keys
   - Adjustments (journals)
C: Nonstructured
   - Nonrelational
   - Nonhierarchal
   - “Snapshot”
D: Finance-created balances
   - Expenses (allocated and direct)

Total data reliance challenge
Digitization equalizes data domains in enterprise decision making.

Action
Finance uses a data lake to augment enterprise data with financial data. Finance leaders stop pursuing “one truth” through centralized control and augmented financial data, instead focusing control on external financial reporting.

Result
Finance provides access to financial data at the transactional level in the cloud and self-service “snapshot” views of financial trends. Leaders utilize more financial data to test micro-strategies around profitability.

Source: Gartner
Digital-ready ERP
Six hallmarks of the digital ERP

- Customer-Facing
- AI-Driven
- Enabling
- Data-Centric
- People-Augmented
- Consumable

Source: Gartner
The digital divide

**Traditional ERP attributes**

- Large ERP on-premises suites
- “Batch” and near line processing
- Highly structured, hierarchical data sources
- Publisher of historical reports and defined periodicity

**Digital-ready ERP**

- Cloud/on-premise hybrid model
- In memory computing to support real time and near time processing
- Structured and unstructured data sources
- Flexible data sets that support microprofitability and predictive analytics

Digitalization demands scalability, reliability, real-time responsiveness, productivity, efficiency, support for rapid innovation and data integrity.

Prepare your ERP for digitalization: Embracing the attributes of digitalization requires a powerful and flexible ERP that can handle huge amounts of data from many sources.

Source: Gartner
Leverage the power of the architecture

Key roles

Techno Functional Capabilities Are:

- ✓ Finance processes and functional requirements
- ✓ Application capabilities and roadmaps
- ✓ End-user configurations

Techno Functional Capabilities Are Not:

- ✗ Environment and integration strategies
- ✗ Testing protocols and management
- ✗ Systems governance and path to production

As more capabilities migrate from traditional IT roles to end user roles, leverage the power of finance knowledge and technology fluency together.
Tech skills at sharp shortage

Scarcity of insight generation competencies
Percentage of finance employees rated effective across insight generation competencies

18% Effective
82% Not Effective

Scarcity of technology competencies
Percentage of finance employees rated effective across core finance IT competencies

17% Effective
83% Not Effective

n = 2,146
Source: Gartner (2016)

Only 3% of finance teams have both the financial analytic management and technology competencies to support financial strategy.
Bots and AI
Digital technology roadmap

Which of the following technologies do you plan to deploy in finance by 2020?

- Predictive Analytics: 50%
- Mobile Financial Process Support and Analytics: 32%
- Robotic Process Automation: 29%
- Integration of External Data: 27%
- Artificial Intelligence/Machine Learning: 27%
- Data Lakes: 15%
- Blockchain: 7%
- Chatbots: 2%
- Natural Language Processing: 2%

n = 419
Source: 2018 Gartner Magic Quadrant for Cloud Financial Planning and Analysis Reference Survey
Robotics is ...

- Computer-coded, flow-chart-driven software
- A replication of how a human interacts with a computer interface
- A program that performs repetitive, rule-based tasks
What robotic process automation (RPA) can do

<table>
<thead>
<tr>
<th>Typical activities replaced by RPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Accessing web/other enterprise applications</td>
</tr>
<tr>
<td>• Following if/then decisions/rules</td>
</tr>
<tr>
<td>• Collecting statistics data from various</td>
</tr>
<tr>
<td>• Making calculation applications</td>
</tr>
<tr>
<td>• Moving files and folders</td>
</tr>
<tr>
<td>• Connecting to system APIs</td>
</tr>
<tr>
<td>• Opening email and attachments</td>
</tr>
<tr>
<td>• Copying and pasting</td>
</tr>
<tr>
<td>• Reading and writing to databases</td>
</tr>
<tr>
<td>• Extracting structured data from documents</td>
</tr>
<tr>
<td>• Scraping data from the web</td>
</tr>
<tr>
<td>• Filling in forms</td>
</tr>
</tbody>
</table>
Example of a process automated via robotics

Sales order processing via robotics

1. Open Outlook email account at beginning of routine.
2. Click on new email to open it; check email for attachment and if attachment, save it in “New Orders” Folder.
3. If no attachment, forward email to Mary Smith, Processor. Exception

Monitor email inbox for orders

Track order

Review order

Input order into SAP

Fulfilment of customer order

1. Open “Orders Tracking” file in Excel application.
2. Copy link of file in “New Orders” folder; go to Excel and paste link in a new row of “Order Tracking” Excel file.
3. Go to open email and copy email date and email address of who sent the email.
4. Go to Excel, paste email date and email address into “Order Tracking” file; save.

5. OpenAdobe PDF reader (to read attachments).
6. Access link in “Order Tracking” Excel file to open the attachment.
7. If “Customer #” field is not found, send notification to Mary Smith notifying her that “Order from ABC email address has not been processed. Can’t locate customer #.” Exception

Legend for activities done by bots

- Opening email and attachments
- Accessing web/other enterprise applications
- Accessing and moving files and folders
- Navigating within applications
- Reading/searching and extracting structured data from documents
- Saving and closing documents

13. Log in to SAP.
14. Select “Sales-A/R”; Select “Sales-Order”.
15. Copy the number associated to the customer # field.
16. Paste customer # into customer field in SAP, hit search to find it and select the customer.
17. Review attachment to “read” first line item in the main body of the order, searching for the “Item No.”
18. ...  
19. Go back to Order Tracker file to update order that processing is complete; save.
20. Go back to start to process next
Robotics is not your typical technology

Summary

Traditional technology often requires extensive planning given the amount of investment involved. Robotics is cheaper, less complex, and does not need as much analysis.

Key differences

Affordability

Robotics is far less expensive than traditional technology

Simplicity

Robotics does not require extensive technical expertise to configure, and may generate its own audit trail

Implementation

Unlike traditional technology, Robotics implementation can be completed in a matter of weeks

Flexibility

Bots can work with any underlying applications and across multiple technology platforms

Solutions

Buy it and try It

Focus on quick wins to let the benefits prove the case for robotics program.

Embrace agile governance

Keep up to speed with and stay ahead of the demand for robotics automation across the enterprise.
Transaction automation: What’s next

Move toward hyperautomation

- **Judgment-Based**
  - Task-Level
  - Process-Level
  - Automation Scope
  - Process Orchestration

- **Rule-Based**
  - Task-Level
  - Process-Level
  - Automation Scope
  - Process Orchestration

Source: Gartner
**Hyperautomation**

Combining RPA with additional technologies

- **Human**
  - Opens envelope
  - Checks it’s an invoice
  - Scans it to generic email box “@invoices”

- **RPA**
  - Launches email
  - Opens PDF invoice
  - Calls OCR to extract data from PDF

- **OCR**
  - Extracts data from PDF
  - Sends data to ML model to contextualize invoice data

- **ML**
  - Fuzzy-match data against data in AP
  - Determine probability of match
  - If acceptable, send back to RPA workflow

- **RPA**
  - Extract PO data from AP system
  - Match invoice data to historical PO if it matches straight on
  - If difficulty matching data, send to exceptions queue; if still not matching, send to person

- **RPA**
  - Enter validated data into AP system

- **Chatbots**
  - Is the invoice paid?

- **Human**

**Source:** Gartner
Automation in analytics

Advanced analytics is a strategic technology being applied by organizational leaders to deepen their understanding of critical organizational drivers. AI and machine learning enable real-time automated event detection and decision support, and help organizations synthesize large amounts of data automatically to support automation and human decision making.
**Advanced analytics using AI**

Advanced analytic forecasting project design (illustrative, adapted from UCB Pharma)

- **Pilot project goal**
  Create operational forecasts using semi-autonomous machine learning to increase accuracy and reduce human effort

- **Time-series forecasting models**
  20+ forecasting models trained on historical financial data

- **Assumptions and rules**
  Human inputs about strategy, external events and desired benchmarks

- **Brain network**
  Autonomous prediction of optimal forecast

---

- **Focus on finance pilot projects first**
  Pilot advanced analytic methods focused on finance problems first. These are a lower degree of technical difficulty and require less political capital.

- **Train using historical data**
  Optimally use at least two years of historical and forecast data to train the model, and validate it against a full year’s actual results. For shorter timeframe, more assumptions might be needed.

- **Augment human expertise**
  Create strategic assumptions and constraints to guide the semi-autonomous model-building process.

- **Enable proactive forecasts**
  Finance creates a proactive, nearly automatic rolling forecast which focuses conversations on strategic issues.
Digital finance
# The profile of digital dexterity

<table>
<thead>
<tr>
<th>Working Digitally</th>
<th>Building Digital Businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ambition</strong></td>
<td><strong>Ambition to Build Digital Businesses</strong></td>
</tr>
<tr>
<td><img src="award-icon.png" alt="Award Icon" /></td>
<td>• Considers digitalization to be critical to company effectiveness</td>
</tr>
<tr>
<td></td>
<td>• Innovates and takes risks in pursuit of digital opportunities</td>
</tr>
<tr>
<td><strong>Ability</strong></td>
<td><strong>Ability to Build Digital Businesses</strong></td>
</tr>
<tr>
<td><img src="gear-icon.png" alt="Gear Icon" /></td>
<td>• Collaborates across seniority levels to set company digitalization direction</td>
</tr>
<tr>
<td></td>
<td>• Identifies digitalization opportunities to improve department/function operations</td>
</tr>
<tr>
<td></td>
<td>• Obtains technologies independently to succeed on the job</td>
</tr>
<tr>
<td><strong>Ambition to Work Digitally</strong></td>
<td><strong>Ability to Work Digitally</strong></td>
</tr>
<tr>
<td>• Believes in technology’s ability to augment personal tasks and activities</td>
<td>• Adapts to work on initiatives with unclear and changing requirements</td>
</tr>
<tr>
<td>• Willing to take on new roles to support digitalization plans</td>
<td>• Works iteratively to improve outcomes</td>
</tr>
<tr>
<td>• Views data and technology proficiency as critical to career advancement</td>
<td>• Can work from anywhere, with the right technologies</td>
</tr>
</tbody>
</table>

\[n = 3,481\text{ employees.}\]
Source: 2018 Gartner Digital Dexterity Survey.
# Preparing for digital

New finance technology organizational models

<table>
<thead>
<tr>
<th>Traditional waterfall</th>
<th>Digital agility</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key attributes</strong></td>
<td><strong>Key attributes</strong></td>
</tr>
<tr>
<td>- Highly sequential</td>
<td>- Short sprints</td>
</tr>
<tr>
<td>- Very predictable and controlled</td>
<td>- Parallel, overlapping efforts</td>
</tr>
<tr>
<td>- Longer cycles</td>
<td>- “Fast to fail”</td>
</tr>
<tr>
<td>- Mature methodologies</td>
<td>- Services instead of ownership</td>
</tr>
<tr>
<td>- Traditional success metrics</td>
<td>- More “losers” than “winners”</td>
</tr>
</tbody>
</table>

**Pros**
- Easier to predict and plan
- Align to traditional measures of capital and success

**Cons**
- Long development cycles, significant hurdles to funding
- Incompatible to many new technologies
- Discourages risk taking

**The end of traditional models**
Funding, management and planning processes will have to change to adopt agile digitalization.

**Action**
- Adapting dynamic funding models that support risk based project assessment.
- Embedding new planning assumptions.

**Result**
- Finance supports more agility and risk taking in pursuing new market opportunities.
- The IRR is replaced with less traditional measures of success with fewer entry barriers.
- Work proceeds in short bursts with gating to identify early winners.
- Long-term planning evolves to accommodate shifts from capex to opex.
## Funding the digital portfolio beyond traditional stage-gate funding

<table>
<thead>
<tr>
<th>Venture Capital Funding</th>
<th>Team Capacity Funding (a.k.a., Standing Teams)</th>
<th>Product Line Funding (a.k.a., Value Stream, Capability or Platform Funding)</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Cost efficiency</td>
<td>✓ Continuous team focus on specific initiatives</td>
<td>✓ Dynamic reprioritization of funds and resources within product lines</td>
</tr>
<tr>
<td>✓ Termination of underperforming investments</td>
<td>✓ Delivery speed</td>
<td>✓ Product speed to market</td>
</tr>
<tr>
<td>✗ Project team’s time (spent to build cases for funding)</td>
<td>✗ Business partner visibility into expected outcomes</td>
<td>✗ Business partner visibility into expected outcomes</td>
</tr>
<tr>
<td>✗ Product speed to market</td>
<td>✗ Flexibility to fund dependent work falling outside the focus of a specific team</td>
<td>✗ Finance partner visibility into utilization of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✗ Disruption to existing processes</td>
</tr>
</tbody>
</table>
Contact us

Gartner for Finance
Email: financeleaders@gartner.com
Web: gartner.com/go/finance
LinkedIn: gtnr.it/finance-li