



# IN-MEMORY COMPUTING: UNLOCKING THE DIGITAL FUTURE

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# Digital Transformation

Digital Transformation is the transformation of business by revamping the business strategy by adopting digital technologies.

This accelerates sales and growth of the business from end to end.



**WIKIPEDIA**  
*The Free Encyclopedia*

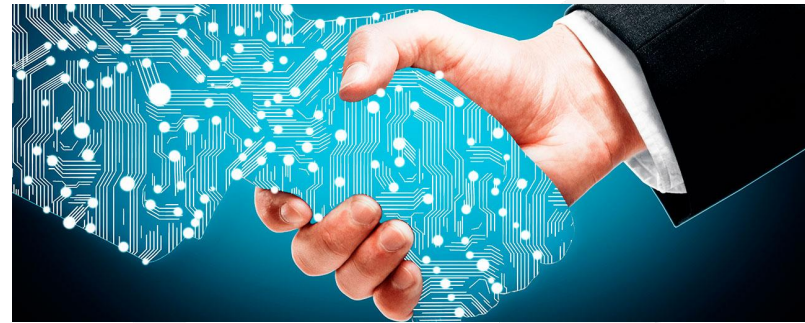
# Enterprise Computing: The Old Goal

- Productivity and Cost Reduction
  - Automate routine tasks
    - Less errors
    - Less cost
  - Tools that aid office work
    - Communication tools
    - Office automation



# Enterprise Computing: The New Goal

- Competitive Advantage and New Business Opportunities
  - Digitize the physical world
    - Competitive advantage
      - Improved customer experience
      - Automate complex decision making
    - New Business Opportunities
      - Achieve new revenues streams
      - Real time situational awareness



# In many ways, what's happening is...

Rather than adopting technology to optimize the capabilities of our business (1960's to 2010's)

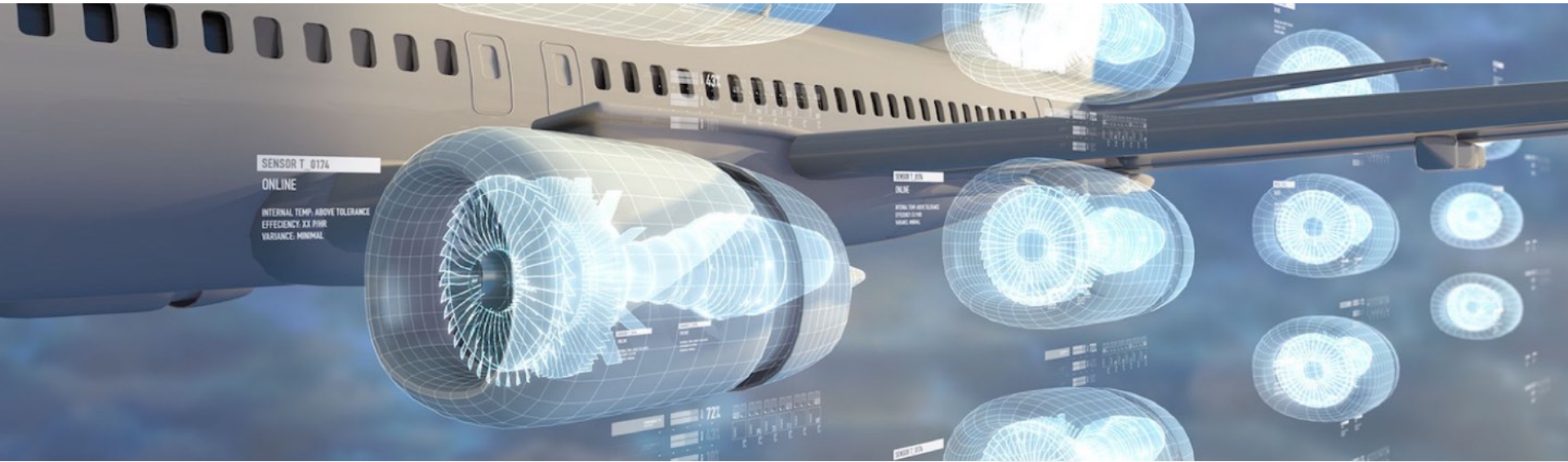
We are now adapting our businesses to optimize for the capabilities of technology



**“40 percent of all technology spending will go toward digital transformations, with enterprises spending in excess of \$2 trillion in 2019”**



# The Digital Twin



**“ The potential economic growth from implementing Industrial IoT will generate \$12 trillion of global GDP by 2030 ”**  
— **accenture** 

# Everything in Our Lives will be Embedded with Electronics, Sensors, Software and Connectivity

- Smart Cities
- Digital Health
- Predictive Maintenance
- Adaptive Energy Grids
- Connected Insurance
- Smart Contracts/Blockchain





**“We want to be a tech company with a banking license”**

**Ralph Hamers, CEO**





Leading digital companies generate **better gross margins**, **better earnings** and **better net income** than organizations in the bottom quarter of digital adopters.

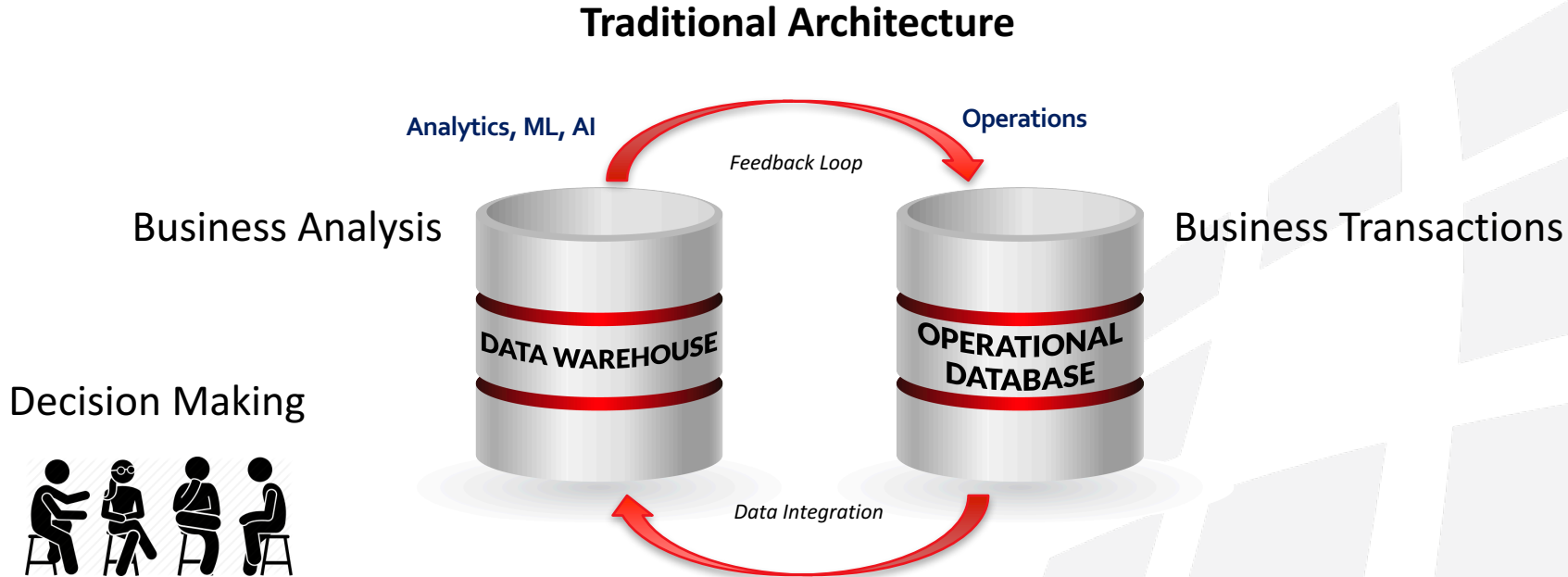
Performance Metric	Digital Laggards (Bottom 25% of enterprises)	Digital Leaders (Top 25% of enterprises)
Three Year Average Gross Margin	37%	55%
Three Year Average Earnings before Taxes	11%	16%
Three Year Average Net Income	7%	11%

# IMC Enables the Digital Enterprise

- When everything is instrumented...
  - Data is always flowing
  - Data ingestion and processing happens on a massive scale
- Instant processing and continuous learning
  - Analysis and decision-making happens in real time to...
    - Capitalize on opportunities as they present themselves
    - Gain instant market advantage



# Traditional IT Architectures Will Struggle to Meet the Needs of the Digital Enterprise

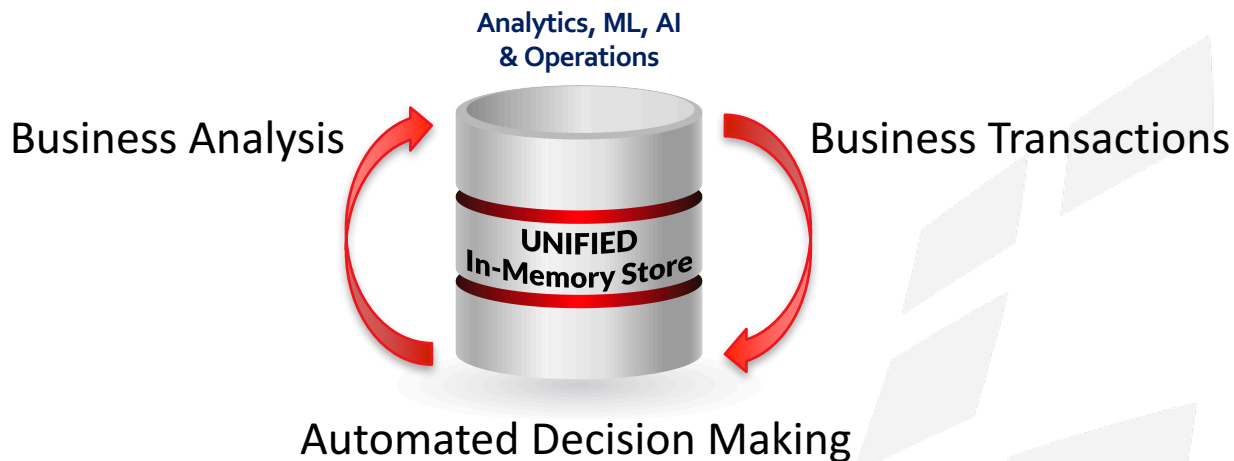


# IMC Platforms will Power the Digital Enterprise

## (HTAP - Hybrid Transaction/Analytical Processing)

*"IMC-enabled HTAP can have a transformational impact on the business." — Gartner 2/17*

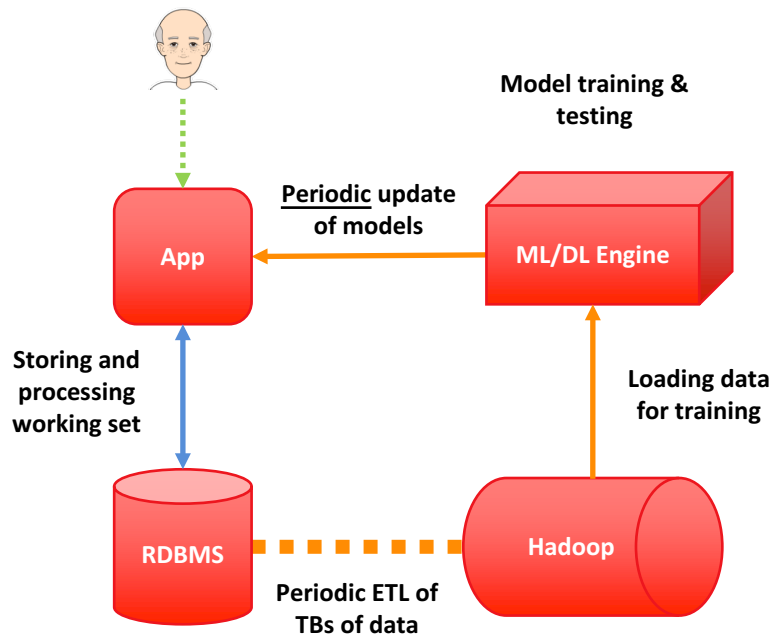
### Unified IMC HTAP Architecture



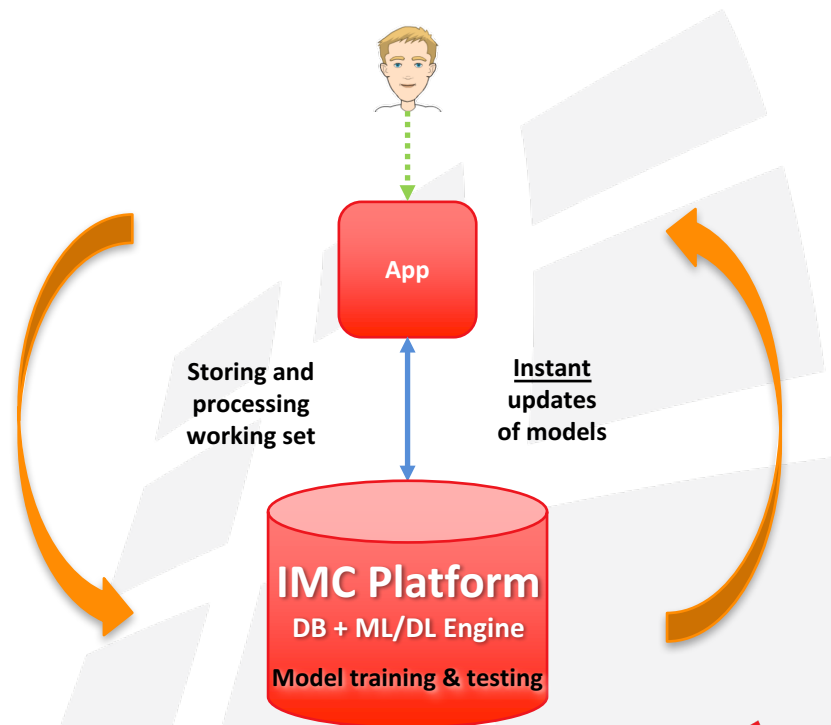
IMC-enabled HTAP enables situation awareness on live transaction data as opposed to after-the-fact analysis on stale data

# IMC Platform with Continuous Learning Framework Enables Simplified ML/DL Workflow — No ETL

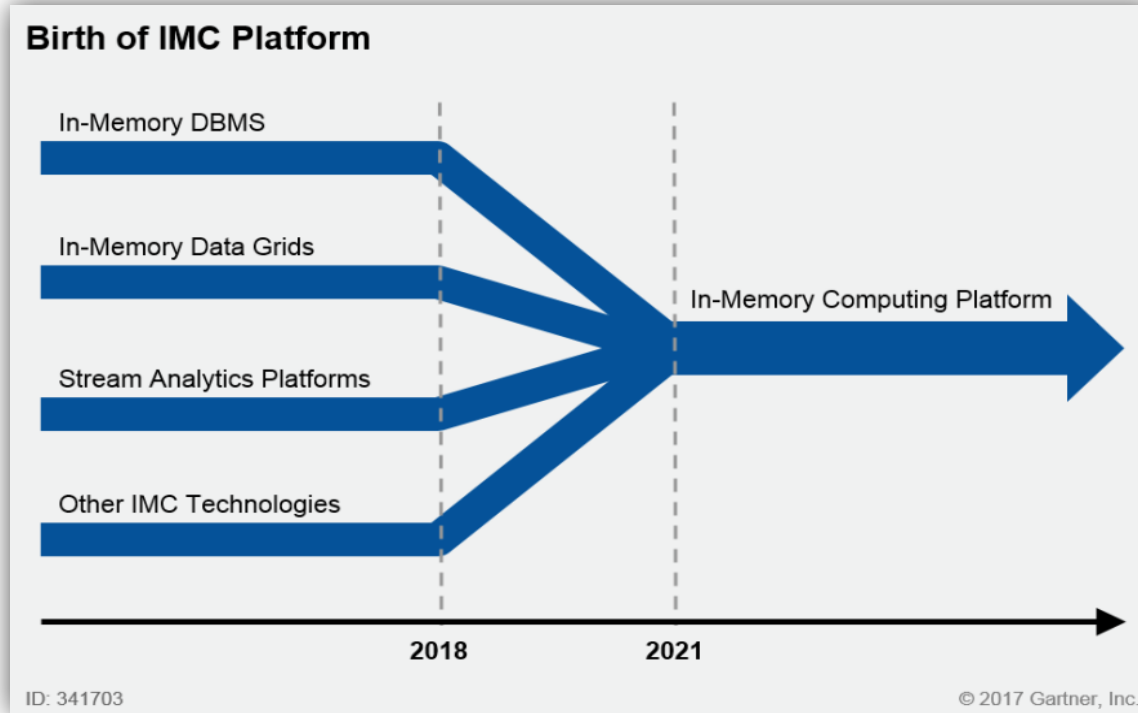
Before



After (With CLF)



# Gartner Defines In-Memory Computing Platform



# Gartner Strategic Planning Assumptions

- By 2019, **75% of cloud-native application development will utilize IMC or services that use IMC**, thus enabling mainstream developers to implement high-scale/high-performance applications
- By 2021, at least **25% of large and global organizations will adopt platforms combining multiple in-memory technologies** to reduce their IMC infrastructure complexity
- By 2022, **40% of large and global enterprises will be using IMDBMSs** to reduce the proliferation of physical data stores in the publication of data



# The Business of the Future is Digital

- Tomorrow's companies will...
  - Sense, optimize, predict and react in real time
  - Embrace new digitally-enhanced business models and revenue streams
  - Be more competitive, opportunistic & profitable
  - Scale faster and more cost effectively

