Johnson & Johnson

The Johnson & Johnson Family of Companies is organized into several business segments comprised of franchises and therapeutic categories.

More than 125 Years of Caring. Our 128,300 employees touch the lives of over a billion people every day, throughout the world.

MEDICAL DEVICES   CONSUMER   PHARMACEUTICAL

500K
Unique Visitors

14
Acquisitions / Divestitures in Flight

450
Apps Released Each Year

500
Terabytes of Data

$113
JNJ NYSE

$311B
Market cap

$2B
Annual IT Spend

We are responsible to our…

Doctors, Nurses, and Patients,
Employees and Their Families,
Communities Where We Work,
Finally, to Our Stockholders

A NEW WORLD of HEALTHCARE Technology

Risk sharing

Millions of new patients

Shift to outcomes

Active policy makers

Consolidation

Expanding care venues

3D Printing

Advanced Analytics

Cloud

Mobile

Robotics

Internet of Things

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J&J Enterprise Health Technology Strategy

OUR HEALTHCARE TECHNOLOGY STRATEGY

Build a flexible, secure, digital business

Use technology to streamline our core business, build enterprise capabilities, and reduce our development cycles.

A digital business rapidly experiments, learns, and pivots. Data and insights enrich every decision. Processes are continuously rethought and reimagined.
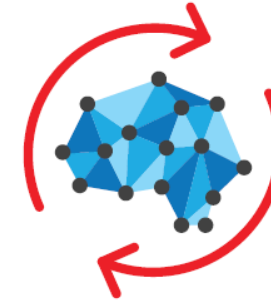
Develop smart products that learn

Develop products that ingest data, analyze and adapt based on insights from consumers, patients and providers.

Smart products leverage feedback loops, machine learning and interconnectedness to continuously improve themselves

Create new models of engagement

Create solutions, interactive tools and ecosystems around stakeholders to improve experiences and outcomes.

Technology and connectivity are connecting doctors, patients, and other stakeholders in new ways, sparking conversations around our products

Become a leader in the Health Tech ecosystem

Identify opportunities to partner and collaborate with digital and connected health start-ups and industry leaders.

Launch programs to continue momentum around early-stage digital & connected helath companies.

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Enterprise Architecture
*Not your grands TOGAF....*

- **Compliance**

- *Standardization*

- **Review Board**

- **Bureaucracy**

- *Top - Down*

- **DEPARTMENT OF ARCHITECTURE**

- *Ivory Tower*

- **Disconnected from Teams and Customers**

→

- **Enabling / Empowering**

- **Deliberate mindset shift Systems Thinking "Big Picture" Holism**

- **Architects as Agilist**

- **Embedded in and close to Business**

- **Distributed Coherent Thinking**

- **Decentralized Sensor Network**

- **NOT a DEPARTMENT. Not funded as a centralized function.**
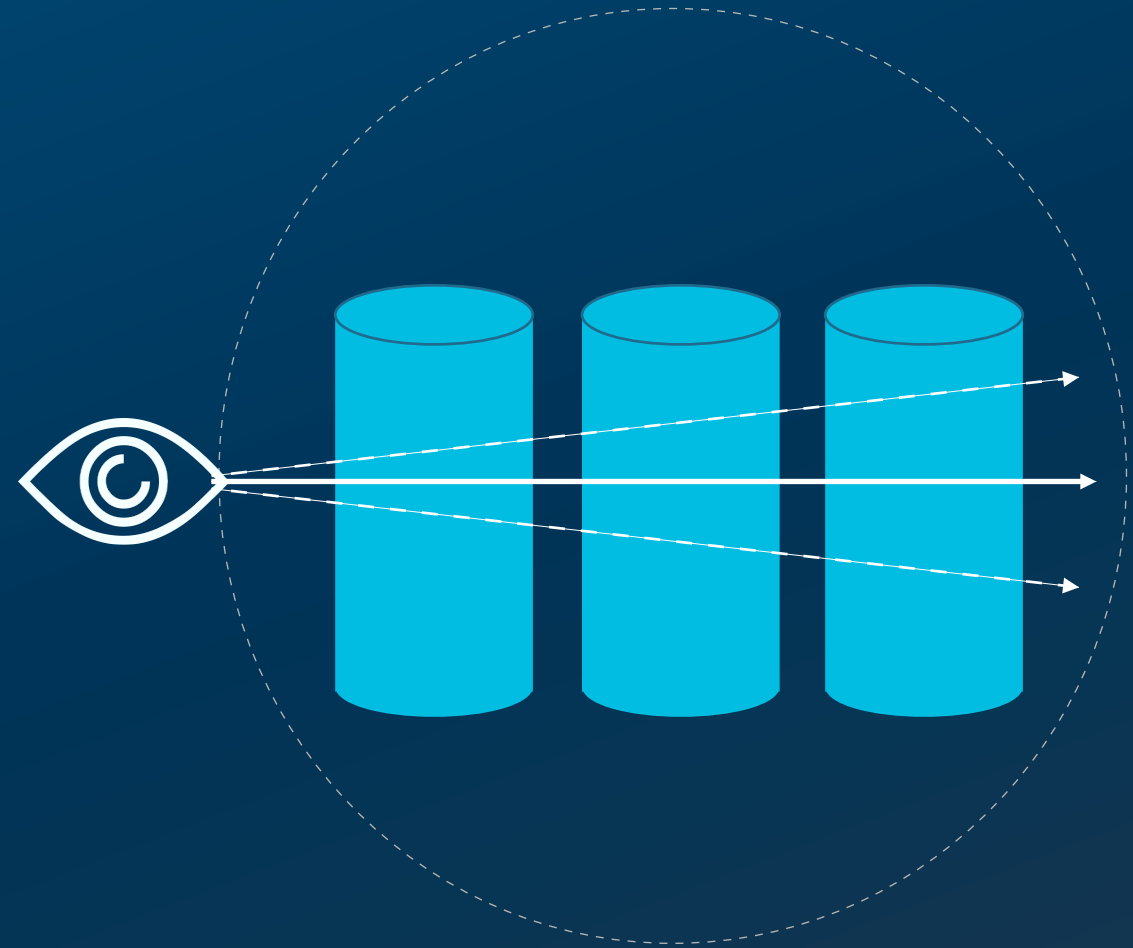
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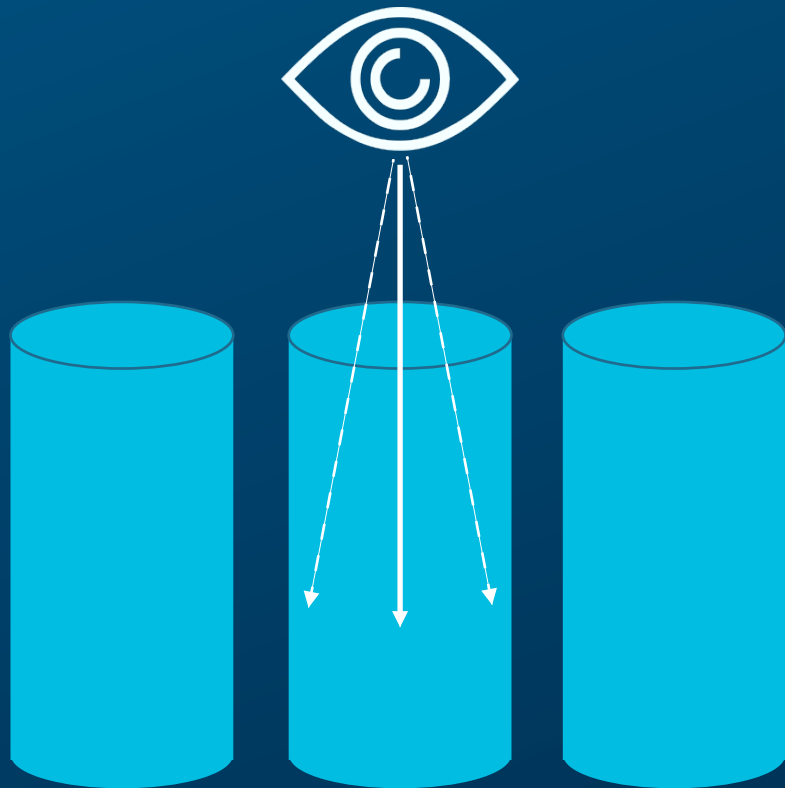
Systems thinking

From local optima to whole-enterprise mindset

Theory of constraints

WHY Change?

How to **CAUSE** the change?

WHAT to change?

What to **CHANGE TO?**

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Enterprise Agile Data Service

Enterprise Agile Data Service (EADS) is an In-memory grid, distributed across the globe and connected directly into our main systems 70% of Supply Chain Data.

Production use cases are now live now and expanding – full integration by 2018

Provides a single version of the truth for our Data, which is inherently Agile

Enables API market place for value added application delivery

Reduces time to insight and action for our business and stakeholders

Isolates Processes and Change

Accelerates Time to Value for Acquisitions and Divestitures – and Legacy Process Modernization

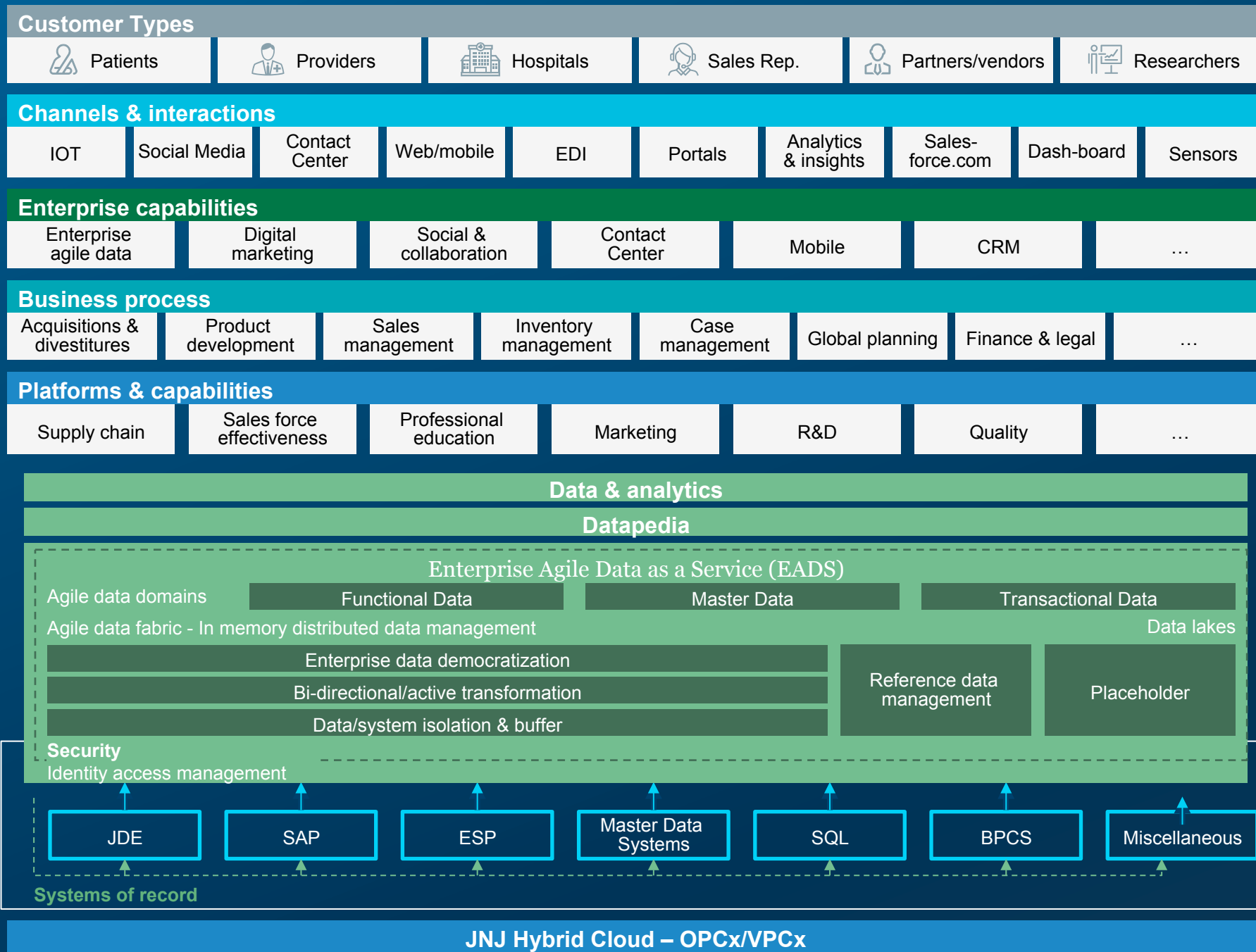**Increased productivity and reduced costs Opportunistic rationalization of ERP platforms**

"

Enterprises which
design & execute
strategies are
constrained to produce
& fund projects
reflecting
organizational and
temporal silos.

— (after) MELVIN CONWAY
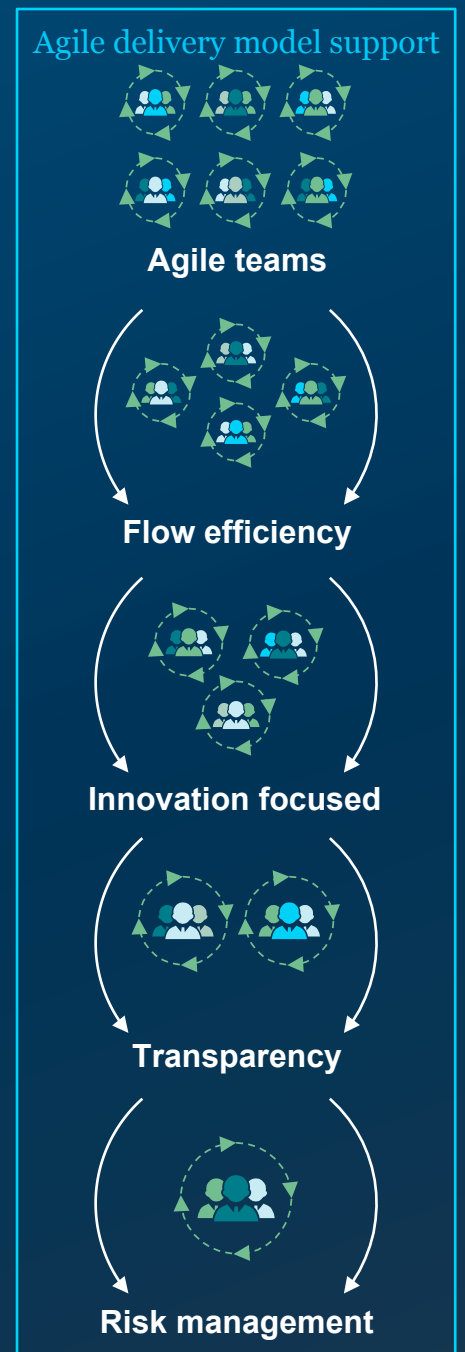
ENTERPRISE REFERENCE TECHNOLOGY ARCHITECTURE

Customer Types
Patients	Providers	Hospitals	Sales Rep.	Partners/vendors	Researchers

Highly flexible
External customer agility of value

Channels & interactions
IOT	Social Media	Contact Center	Web/mobile	EDI	Portals	Analytics & insights	Sales-force.com	Dash-board	Sensors

More flexible
Internal business value focused

Enterprise capabilities
Enterprise agile data	Digital marketing	Social & collaboration	Contact Center	Mobile	CRM	…

Systems view
Strategic revision

Business process
Acquisitions & divestitures	Product development	Sales management	Inventory management	Case management	Global planning	Finance & legal	…

Platforms & capabilities
Supply chain	Sales force effectiveness	Professional education	Marketing	R&D	Quality	…

Virtual enterprise
Agile delivery

Data & analytics

Datapedia

Enterprise Agile Data as a Service (EADS)

Agile data domains
Functional Data	Master Data	Transactional Data

Agile data fabric - In memory distributed data management

Data lakes

Enterprise data democratization	Reference data management	Placeholder
Bi-directional/active transformation		
Data/system isolation & buffer		

Most rigid
OPCO Assets

Security
Identity access management

JDE	SAP	ESP	Master Data Systems	SQL	BPCS	Miscellaneous

Systems of record

JNJ Hybrid Cloud – OPCx/VPCx

Agile delivery model support

Agile teams

Flow efficiency

Innovation focused

Transparency

Risk management

High velocity, fast cycles rapid experimentation

Slow velocity, long cycles tightly coupled systems

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Our Approach: Fund strategies with visible outcomes

Not (only) projects with completion dates….

- **PROJECT(s)** create a localized space, with little real flexibility for experimentation; No slack.

- Organizations, functions, and companies create and sponsor **PROJECTS** which are constrained to localized sponsor's need, not Enterprise capability…

- **PROJECTS** are Temporal Silos which struggle with time horizons greater than 1 year, particularly in publicly traded enterprises.

- To deliver **VALUE/OUTCOMES**, **STRATEGICALLY**, we must therefore relax the lateral (silo) and temporal (duration) constraints of a **FUNDING** corridor.

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Principles of Clydesdales

- Visualize Your Work, but first, **Visualize Your System!**

- Identify the biggest constraints on your system, then apply the five focusing steps:
  1. Switch from Projects (Temporal Silos), to Strategies (Capability Value Streams)

  2. Align cross-functional, cross-disciplined teams to Strategies & Enterprise Services

  3. Stop measuring resource efficiency (cost-accounting/activity based accounting), Start measuring flow efficiency

  4. Shape Value and Failure Demand through Human Sensor Networks

  5. Identify Asymmetric Bets for Experimentation & Learning

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A Tale of Two Cities
(Wait!? I thought this room looked familiar)

IT Agility That Delivers Business Agility
medco® MAKING MEDICINE SMARTER.
Mark Landy CTO
February 2012

- Strong sponsorship as means to the end
- Financial case and model
- Change management
- Rigor and discipline

SEPTEMBER 2017
The Need for Speed
Enabling DevOps Through Enterprise Architecture
Mark Landy

**Sponsorship / strength don't work
You need to sell into a market:**

- Go-to-Market plan
- Viral / uptake
- "Crossing the Chasm"

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what's next...

When you cant directly change the system you are in, hack it

- We hacked the EA role to inject TOC etc

- Whats next, we will hack the finance function by injecting Throughput Accounting (to Address Conway)

- Shift from Program Transformation to Sustain. (Two Storylines simultaneously)

- Treat DATA as depreciating asset that lives beyond a project, and attracts "expected maintenance" and renewal activities, at the scope of the asset, the Enterprise

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The Need for Speed

Enabling DevOps Through Enterprise Architecture

Thank You