An open, connected systems approach for product and systems development

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Innovate2013
The IBM Technical Summit

Engineers

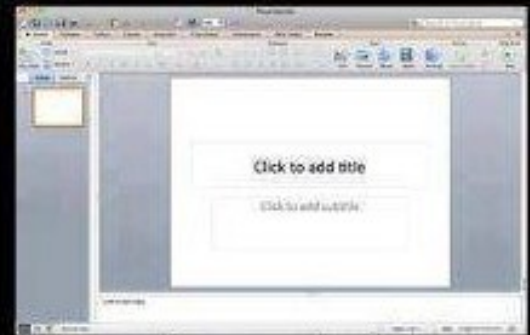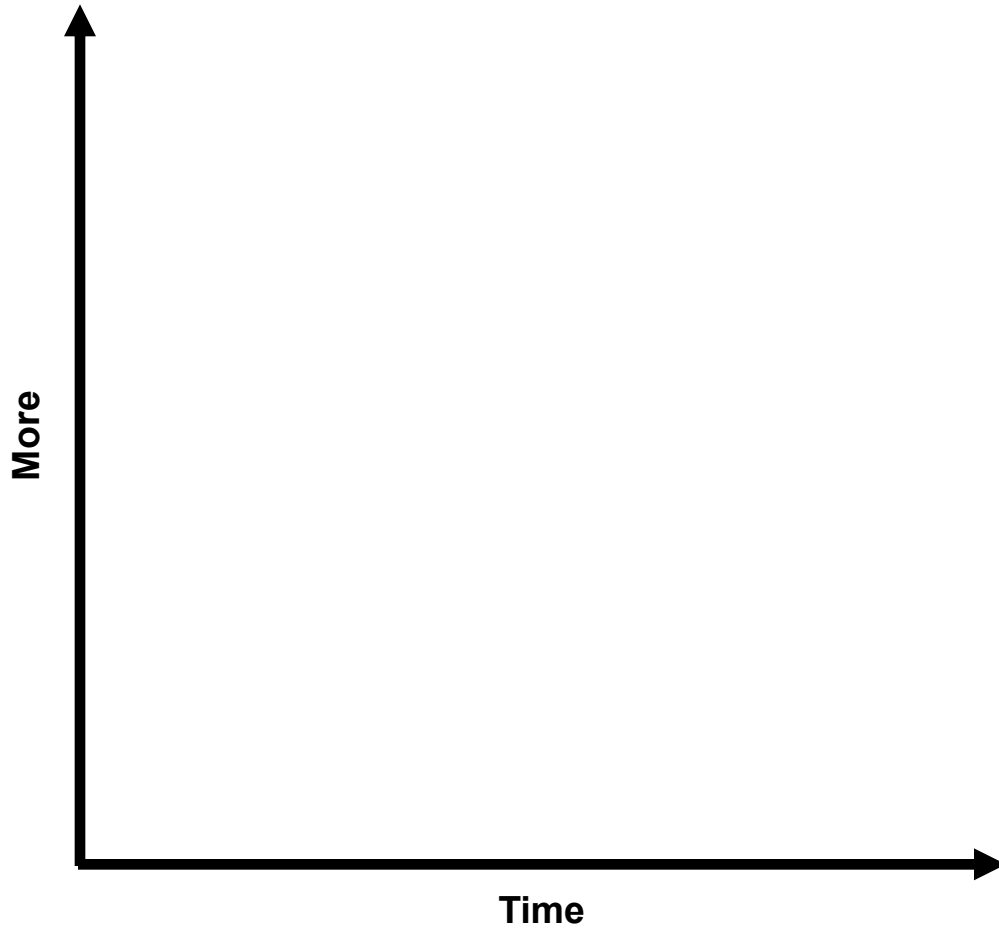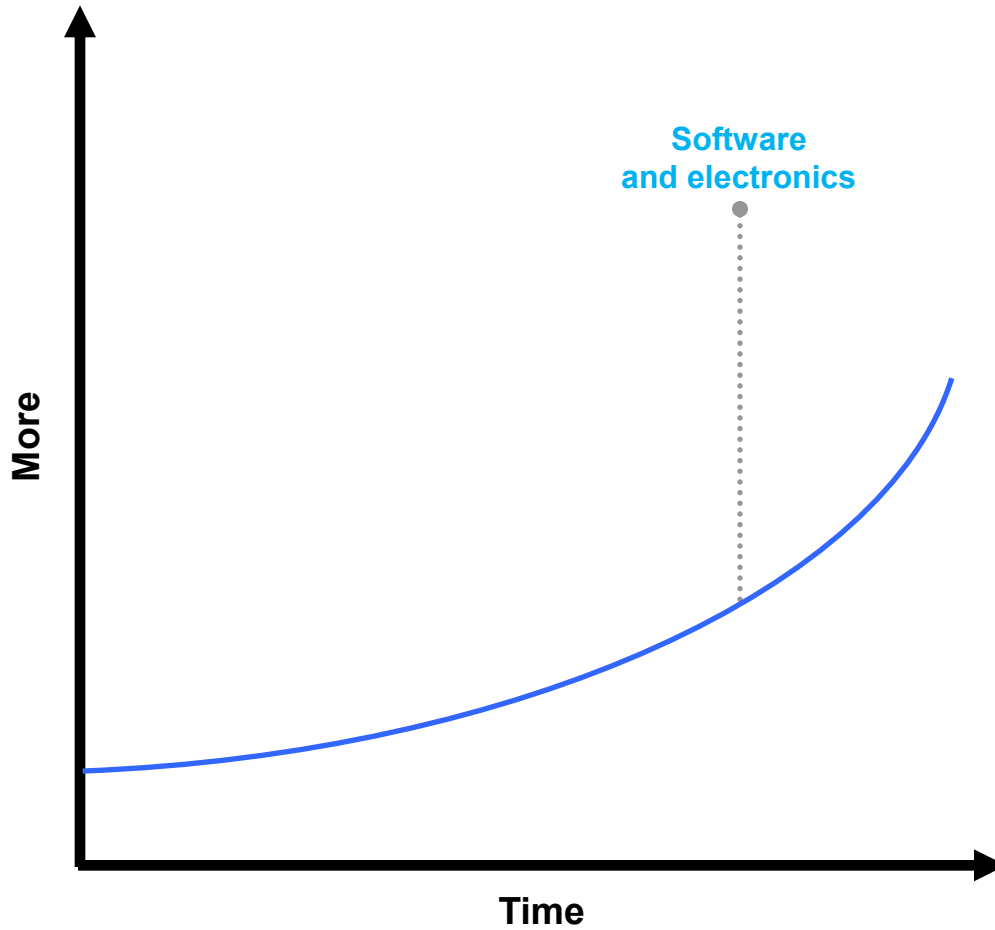|		
What my friends think I do	What my customer thinks I do	What society thinks I do
What my parents think I do	What I think I do	What I really do

Voyager leaves the solar system…
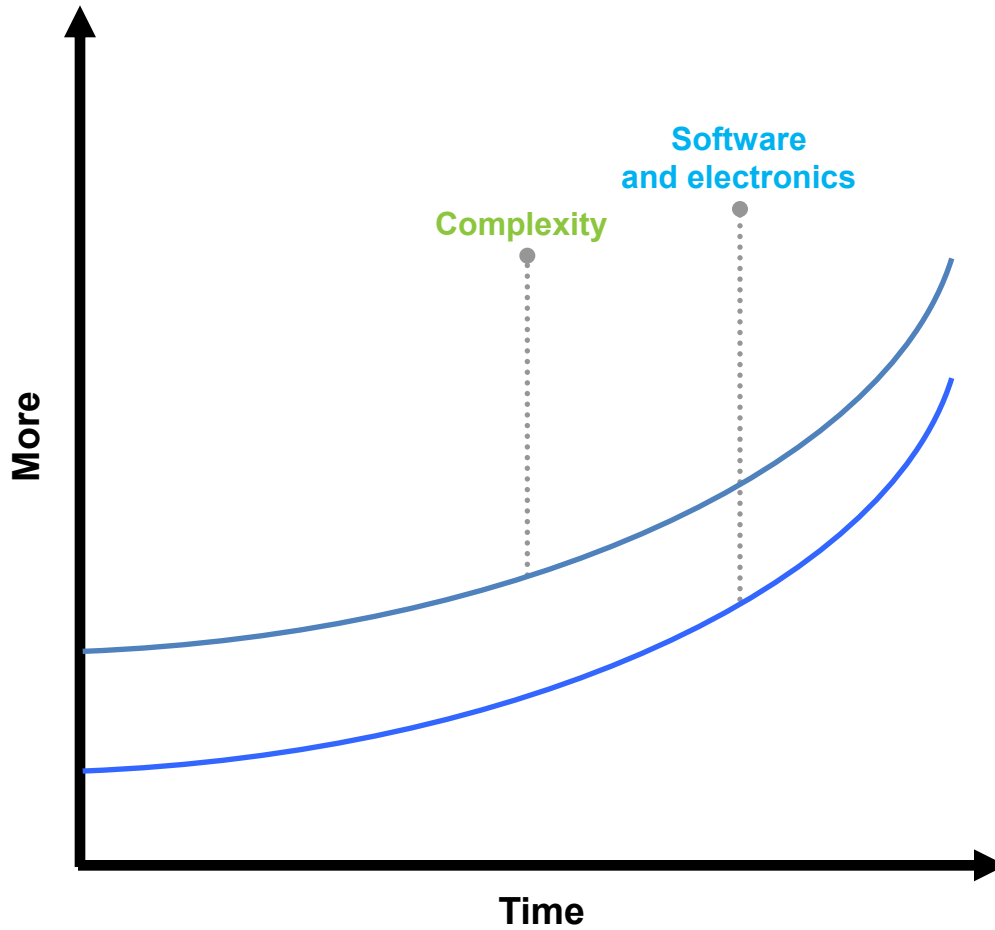## *Imagine what the next 36 years will bring.*

- Launched in 1977
- It was designed for a 4 year mission to explore Saturn
- Now 11.7 Billion miles from earth and traveling at 38,000 miles per hour
- Operates on technology that would be considered worthless today
  - 8-track tape recorder
  - Computers with one-240,000th the memory of a low-end iPhone

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More

Time

Software
and electronics

More

Time

Complexity

Software and electronics

More

Time

Software and electronics

Complexity

Consumer expectations

More

Time
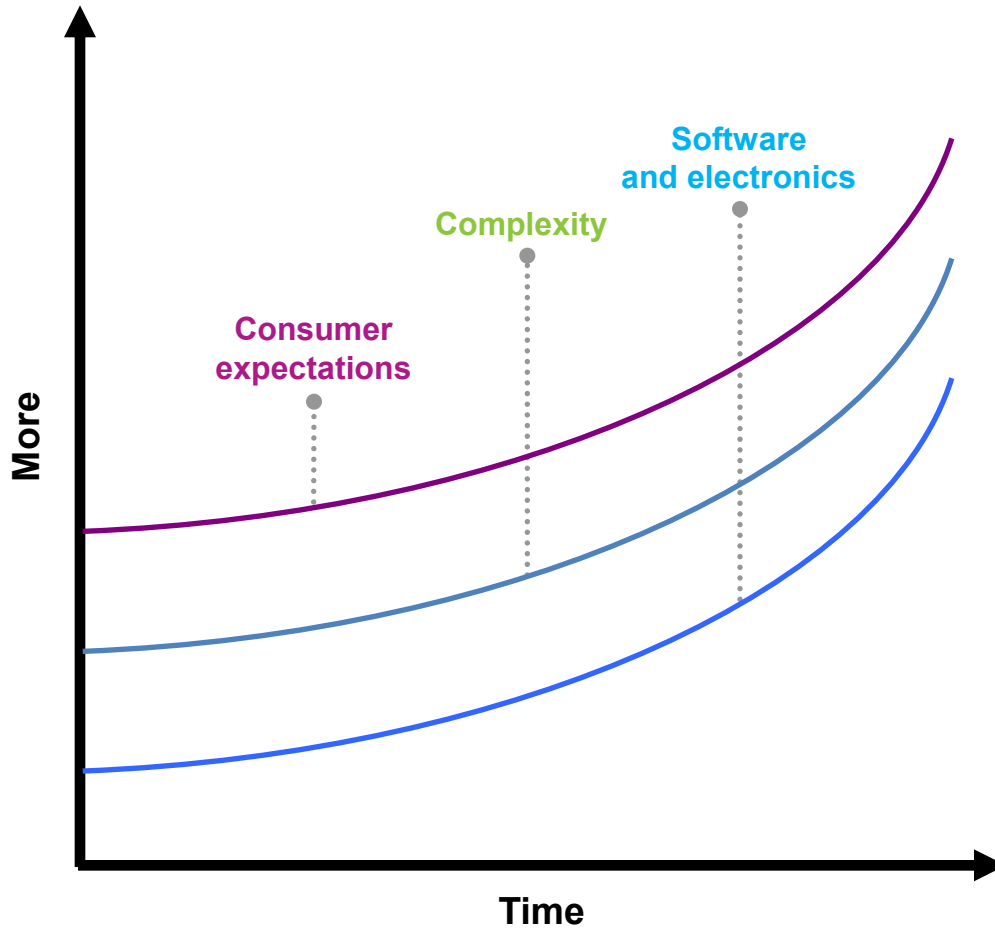
IBM helps you turn product development into a competitive advantage

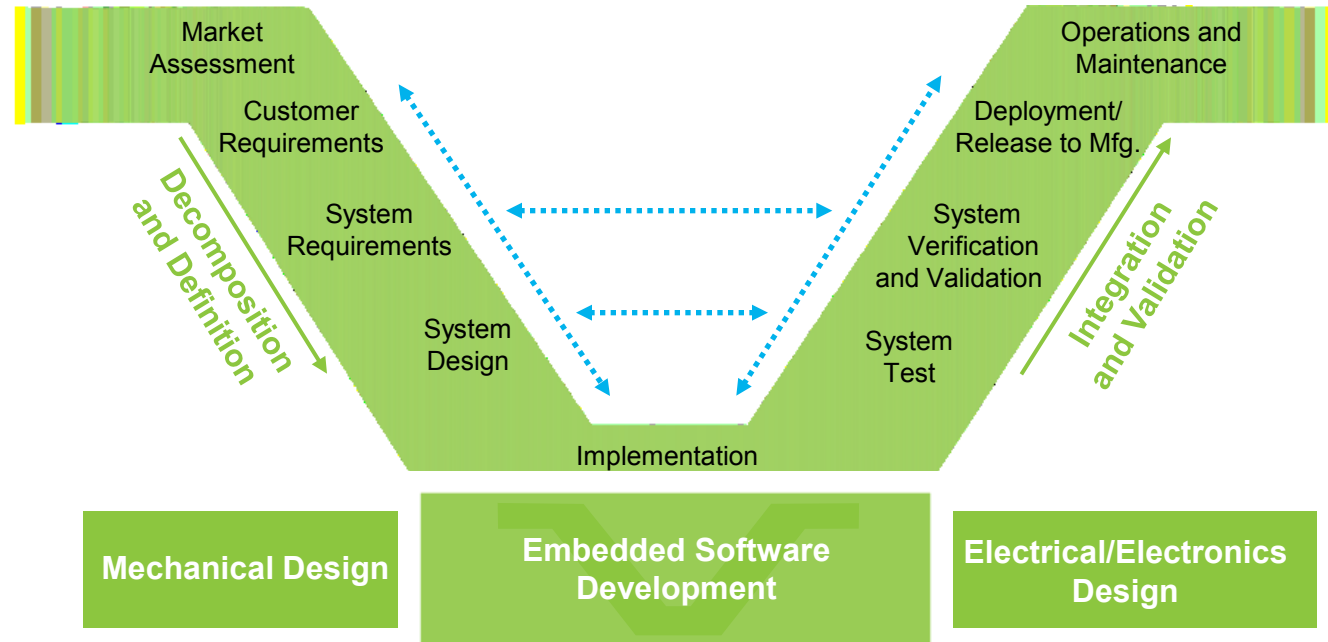# IBM helps you turn product development into a competitive advantage

- Improve **systems engineering** to **tackle growing product complex**

Market Assessment

Customer Requirements

System Requirements

System Design

Decomposition and Definition

Implementation

Operations and Maintenance

Deployment/ Release to Mfg.

System Verification and Validation

System Test

Integration and Validation

Mechanical Design

Embedded Software Development

Electrical/Electronics Design

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IBM helps you turn product development into a competitive advantage

- Improve **systems engineering** to **tackle growing product complex**

- Improve **software development** to **deliver innovatio faster**

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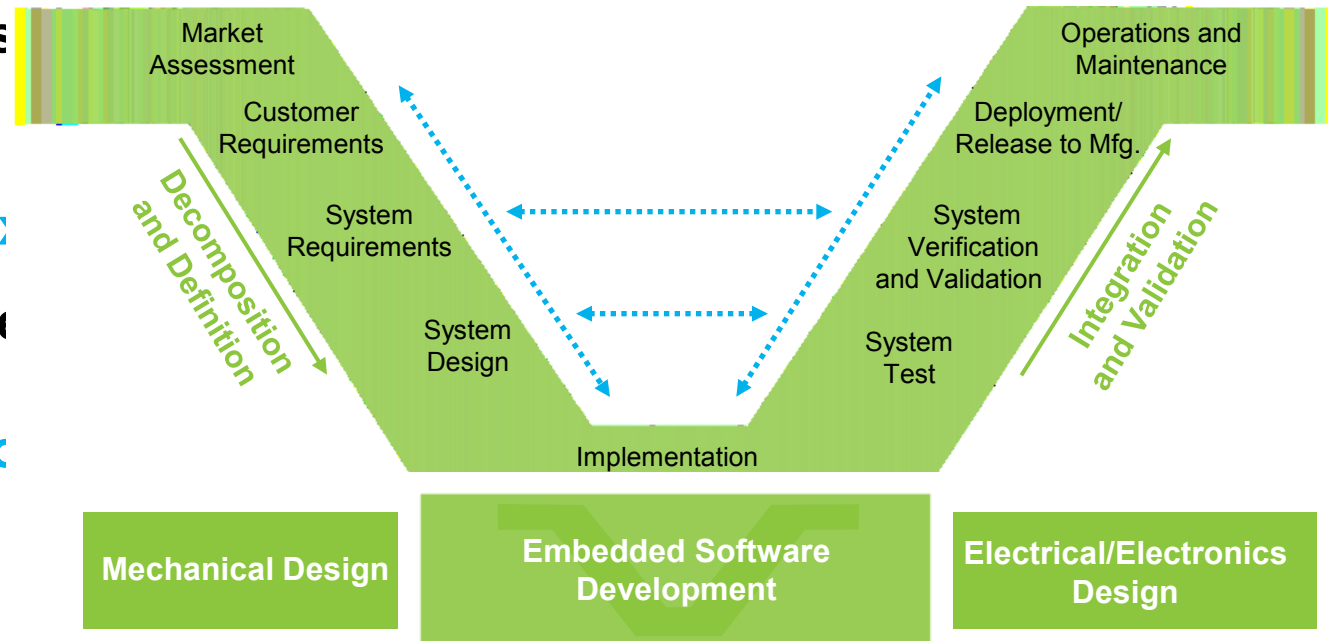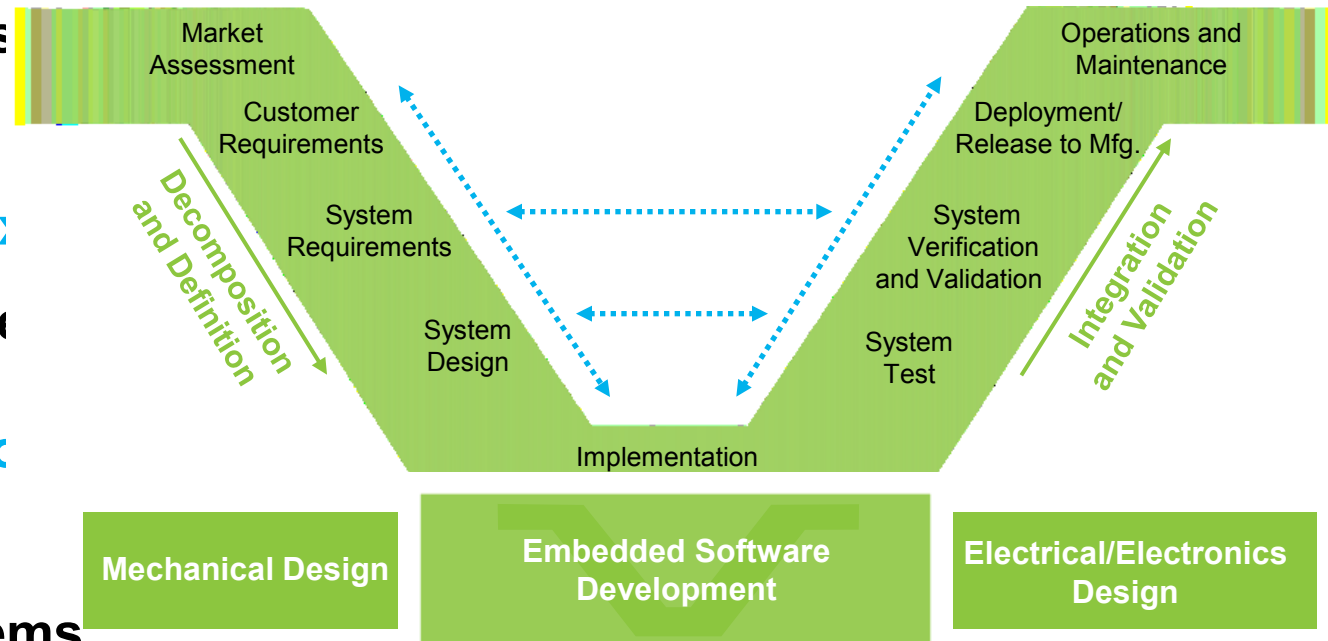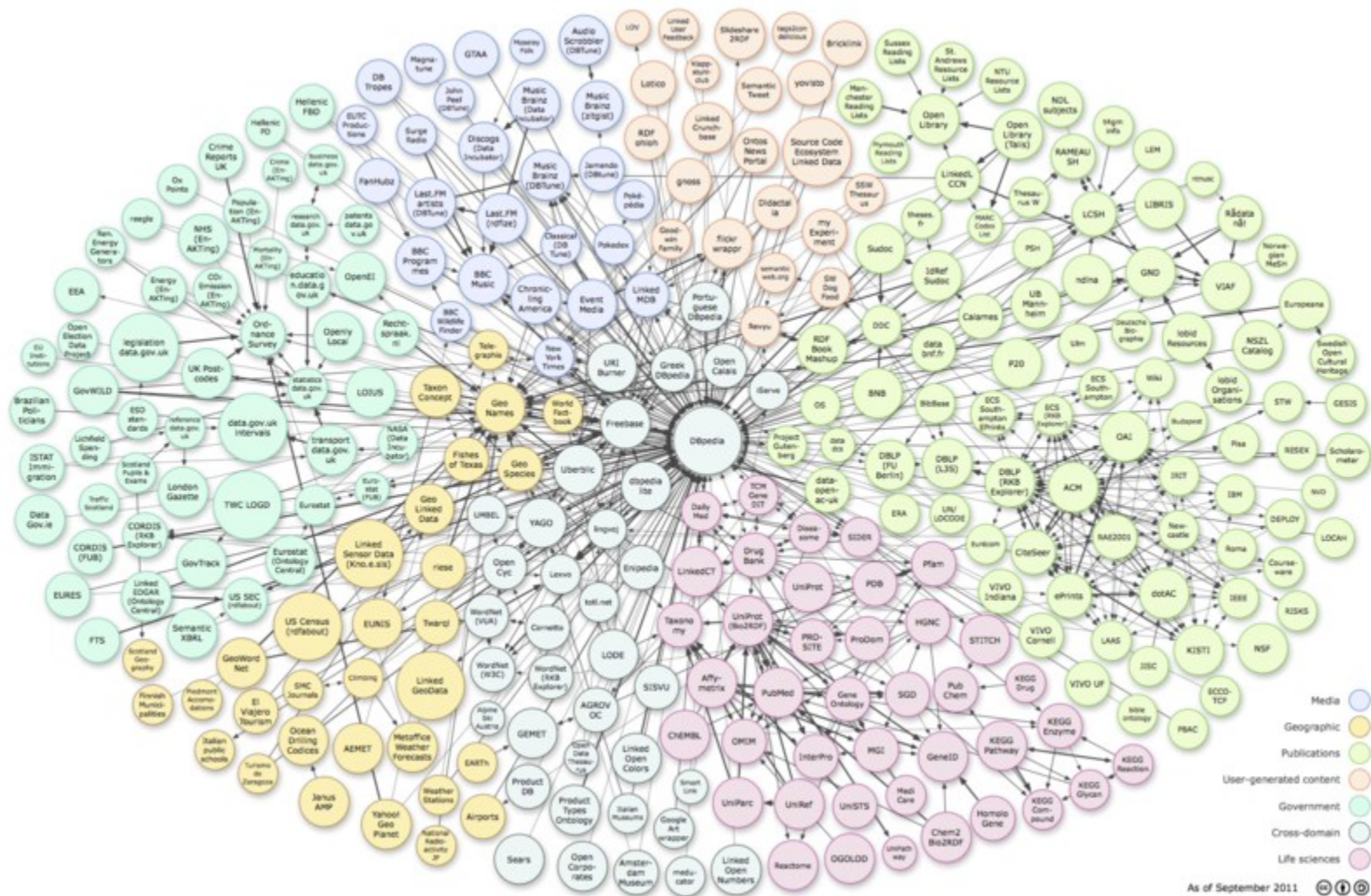**Embedded Software Development**

Electrical/Electronics Design

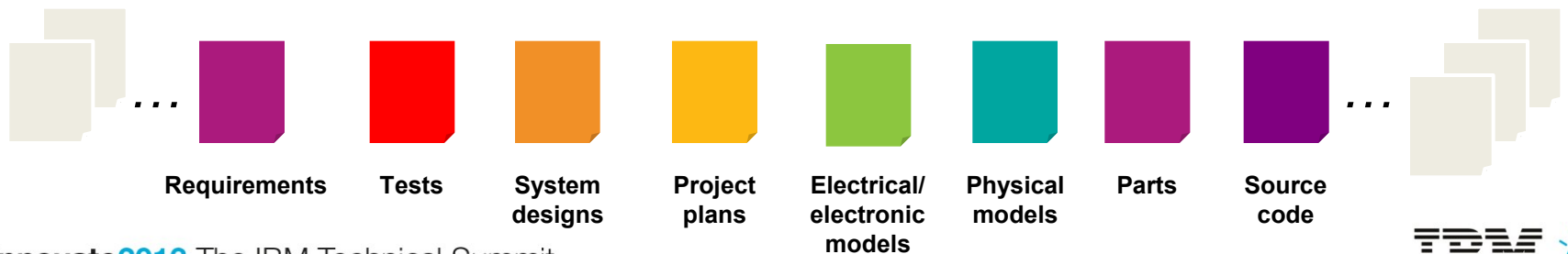# IBM helps you turn product development into a competitive advantage

- Improve **systems engineering** to **tackle growing product complex**

- Improve **software development** to **deliver innovatic faster**

- With an **open, integrated systems approach** that **enables access to all engineering information**

Market Assessment		Operations and Maintenance
Customer Requirements		Deployment/ Release to Mfg.
System Requirements		System Verification and Validation
System Design		System Test
	Implementation	

Decomposition and Definition

Integration and Validation

Mechanical Design	**Embedded Software Development**	**Electrical/Electronics Design**

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Linked Data

Realizing an open, connected, systems approach

... **Requirements** **Tests** **System designs** **Project plans** **Electrical/ electronic models** **Physical models** **Parts** **Source code** ...

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Realizing an open, connected, systems approach

Requirements Tests System designs Project plans Electrical/ electronic models Physical models Parts Source code

Realizing an open, connected, systems approach

OSLC

Requirements | Tests | System designs | Project plans | Electrical/ electronic models | Physical models | Parts | Source code

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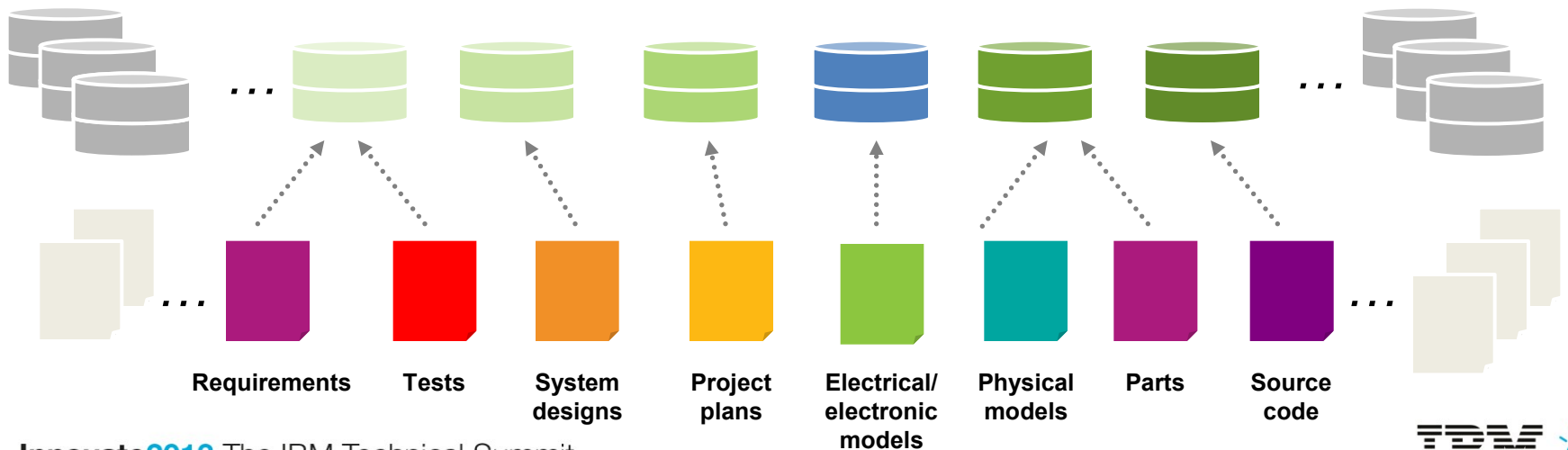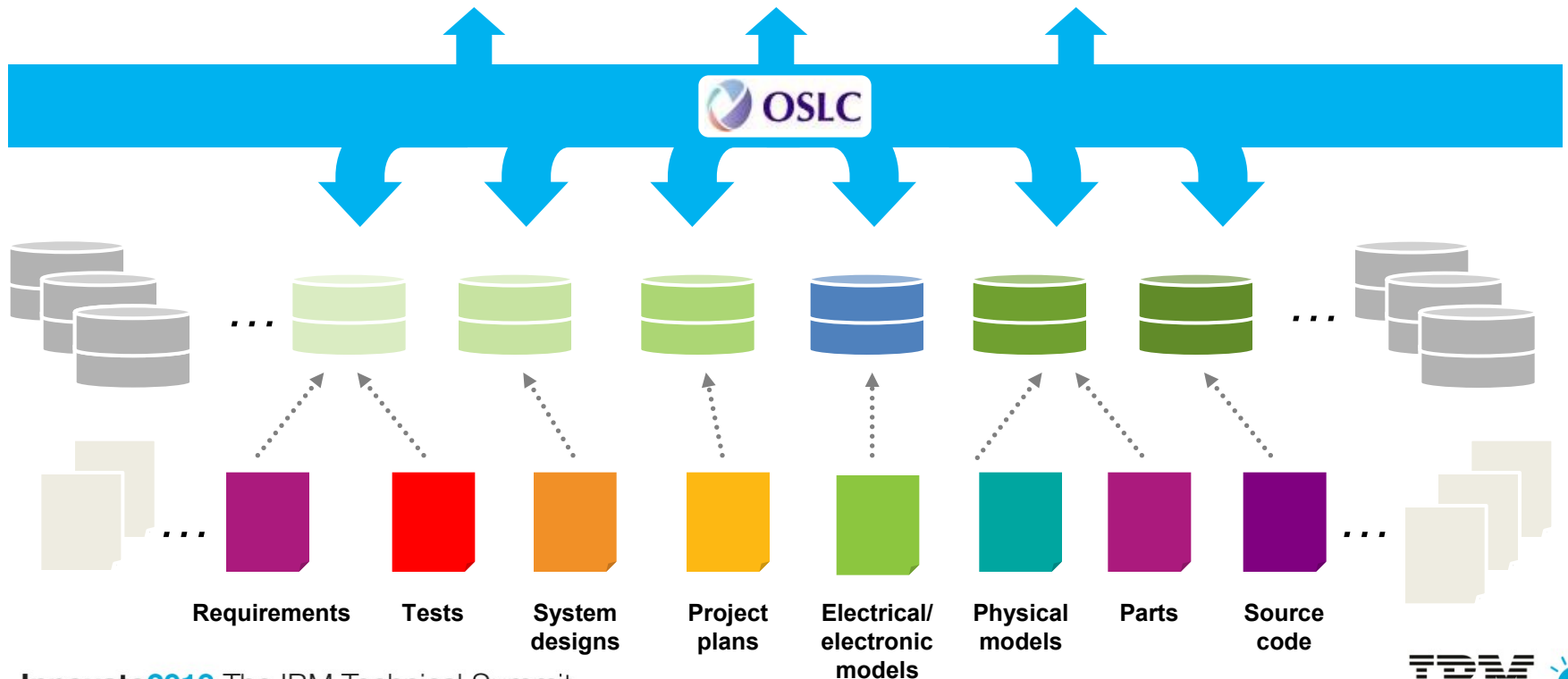
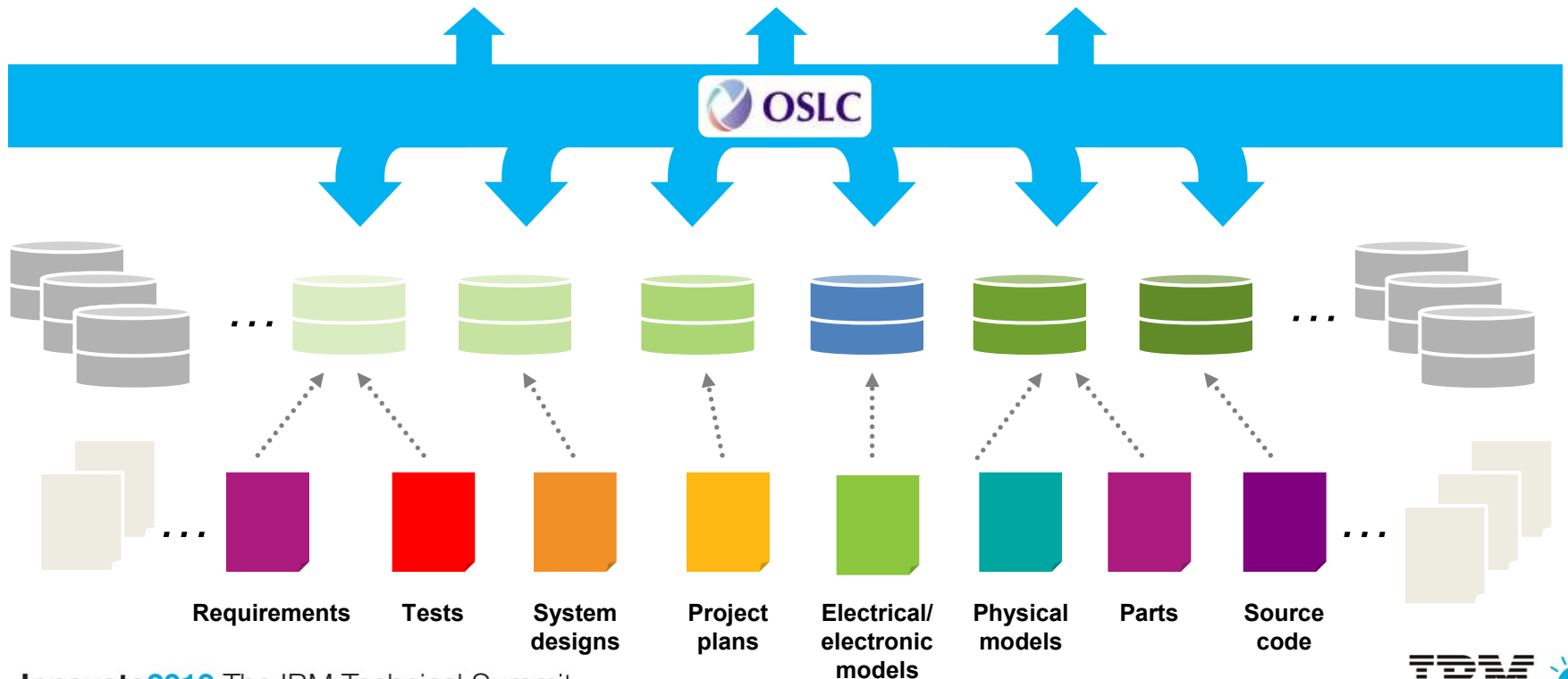# Realizing an open, connected, systems approach

Open Services for Lifecycle Collaboration
Lifecycle integration inspired by the web

Eclipse Lyo
Enabling tool integration with OSLC

OASIS
Advancing open standards for the information society

OSLC

Requirements Tests System designs Project plans Electrical/ electronic models Physical models Parts Source code

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Make more informed engineering decisions

Requirements   Tests   System designs   Project plans   Electrical/ electronic models   Physical models   Parts   Source code

Make more informed engineering decisions

Visualize
Cross domain views and navigation

OSLC

Requirements Tests System designs Project plans Electrical/ electronic models Physical models Parts Source code

Make more informed engineering decisions

Visualize
Cross domain views and navigation

Analyze
Query, reporting, and impact analysis

OSLC

Requirements   Tests   System designs   Project plans   Electrical/ electronic models   Physical models   Parts   Source code

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Make more informed engineering decisions

Visualize
Cross domain views and navigation

Analyze
Query, reporting, and impact analysis

Organize
Product, system and component definition

OSLC

Requirements Tests System designs Project plans Electrical/ electronic models Physical models Parts Source code

Connect across systems, software and electrical/electronic engineering

System & Software Design

Engineering Lifecycle Management

Requirements Management

Quality Management

Task & Change Management

Context SDM

Capital

Multiple other integrations, e.g. MCAD

Sourcery CodeBench

Expedition Enterprise

Volcano
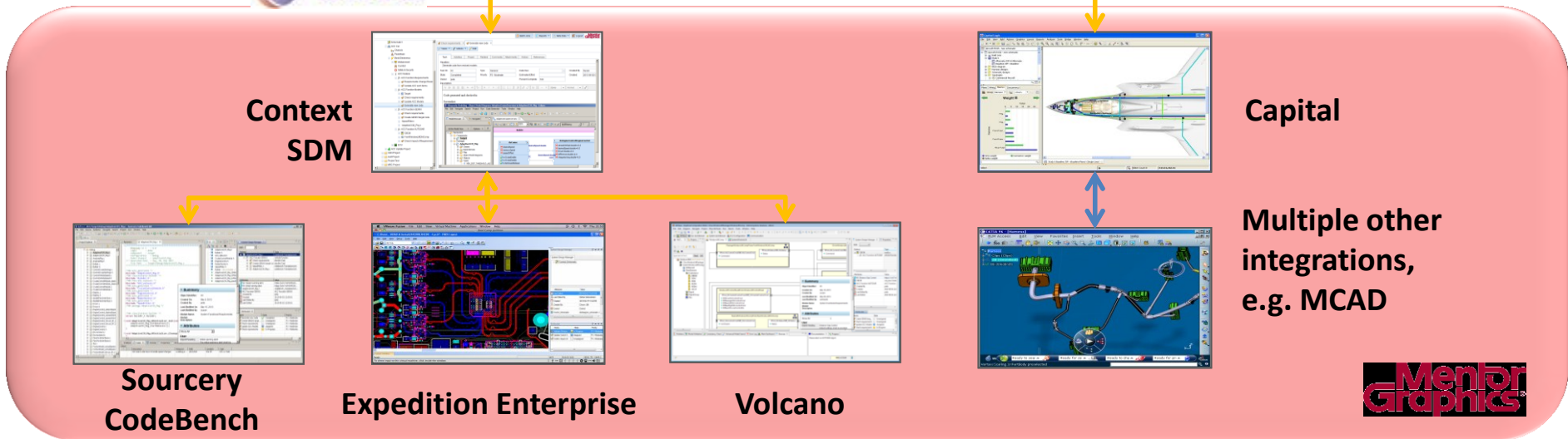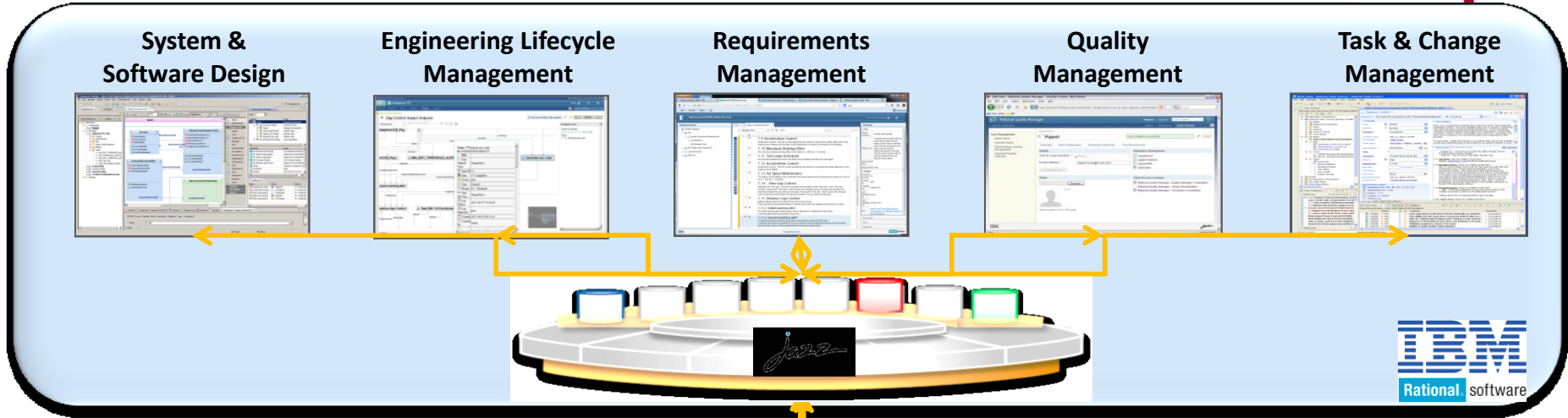
Connect across product development and test

System & Software Design · Engineering Lifecycle Management · Quality Management · Requirements Management · Task & Change Management · IBM Rational software

Graphical Programming · Analysis and Reporting · Test Automation · Real-Time Testing · Enterprise Connectivity

Multi-Chassis Systems · **PXI** · **NI CompactRIO** · **NI CompactDAQ** · NATIONAL INSTRUMENTS
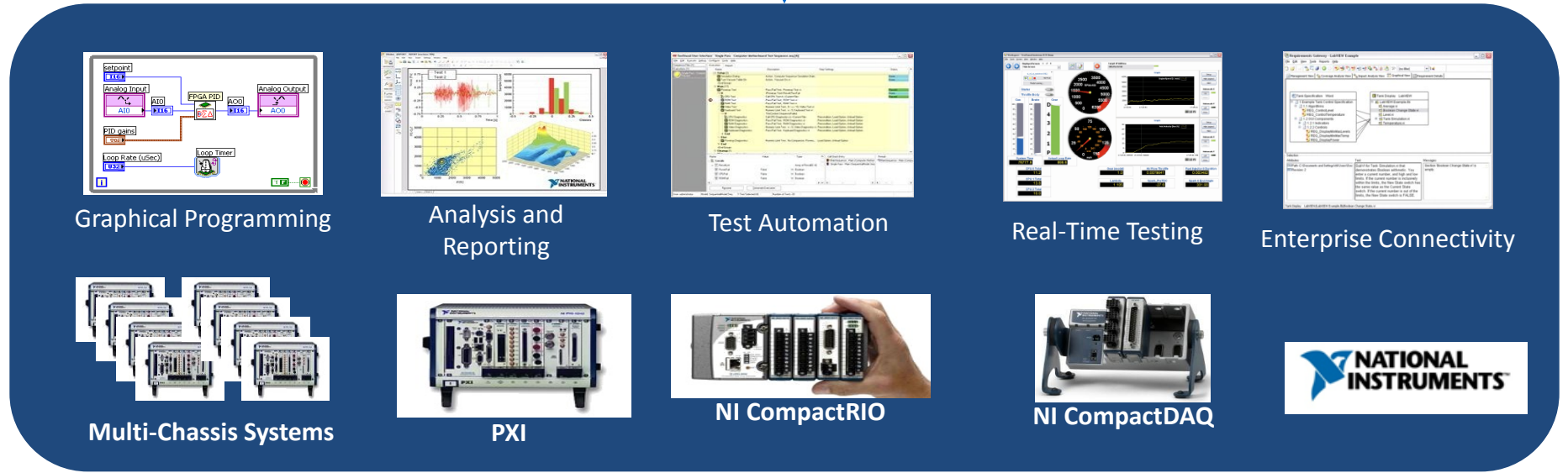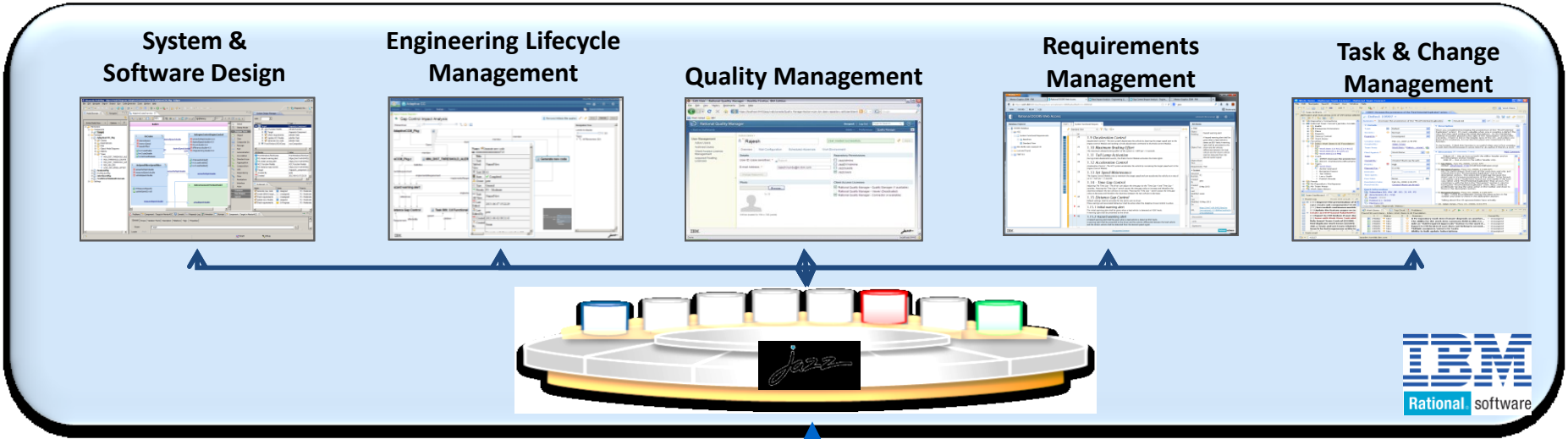
An open, integrated systems approach delivers:

Market Assessment

Customer Requirements

System Requirements

Decomposition and Definition

Operations and Maintenance

Deployment/ Release to Mfg.

System Verification

Integration Validation

Access to all engineering information

Implementation

Mechanical

Embedded Software

Electrical/Electronics

FIND OUT MORE

THE OFFICIAL
Rational USER COMMUNITY
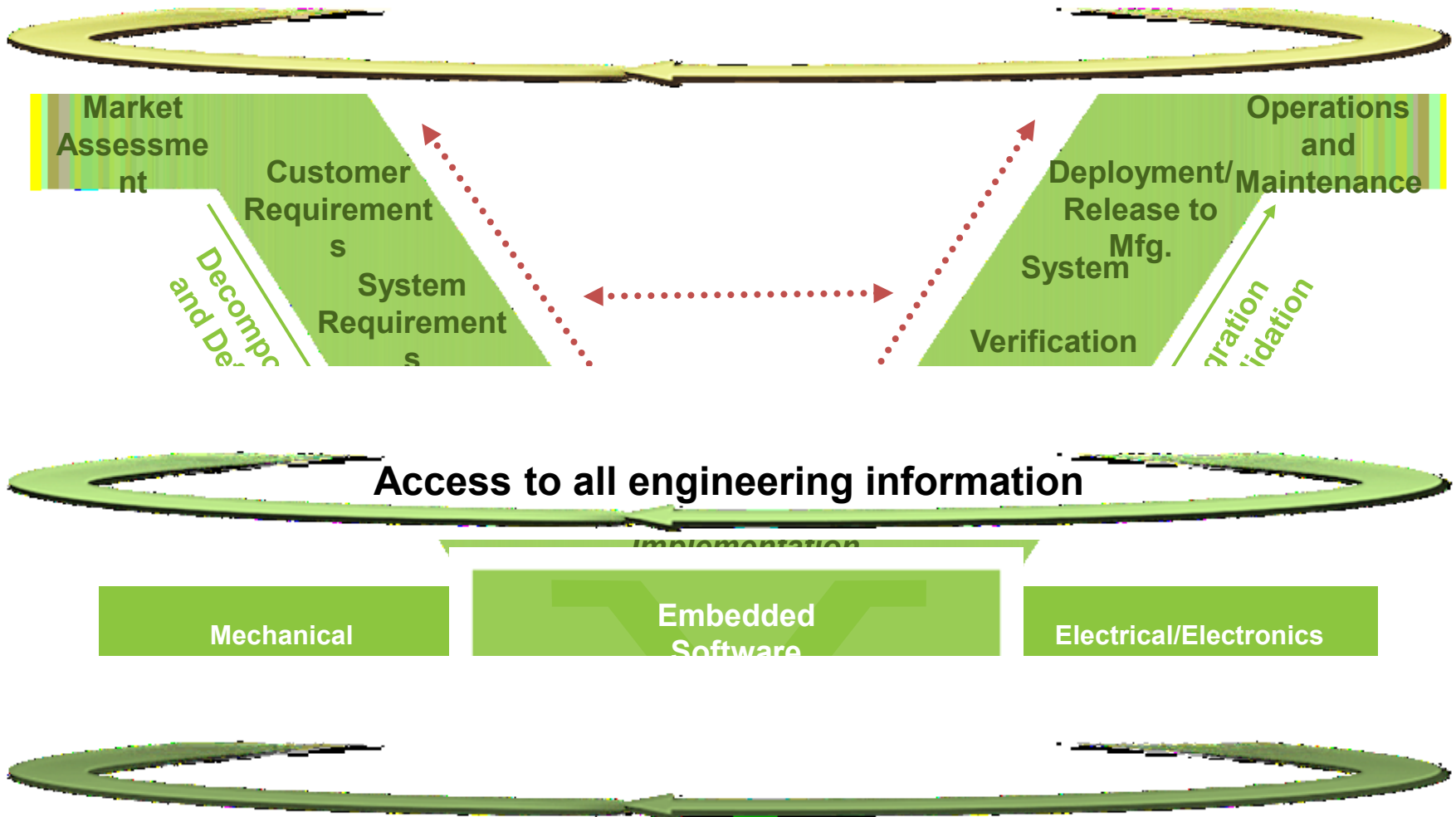
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GRUC Webcast

Faster to Build. Faster to Market. New Solutions for Smarter Product Development

**Thursday, November 21
11:00 AM (EST)**

Join Bret Greenstein, Vice President, Rational Smarter Product Development, IBM Software Group, to hear what's new this fall for Smarter Product Development. In this webcast, Bret will show through client success stories how Rational is continuing to deliver on its strategy of an open, connected, systems approach to Smarter Product Development.

REGISTER

http://rational-ug.org/

…and join the conversation at http://ibm.co/systems-community

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Questions

Thank You