



Enable Business Service & Product Innovation

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Vice President – Worldwide Strategy, Rational



Indovation = India + Innovation



Bloomberg BusinessWeek



Dr. Girish Khurana, an internist in Bahadurgarh near Delhi, holds the \$1,500 MAC 400 Michael Rubenstein/Redux

THE TIMES OF INDIA

Innovation and research to steer India's knowledge economy

Surbhi Bhatia, TNN, Feb 15, 2010, 09.46am IST

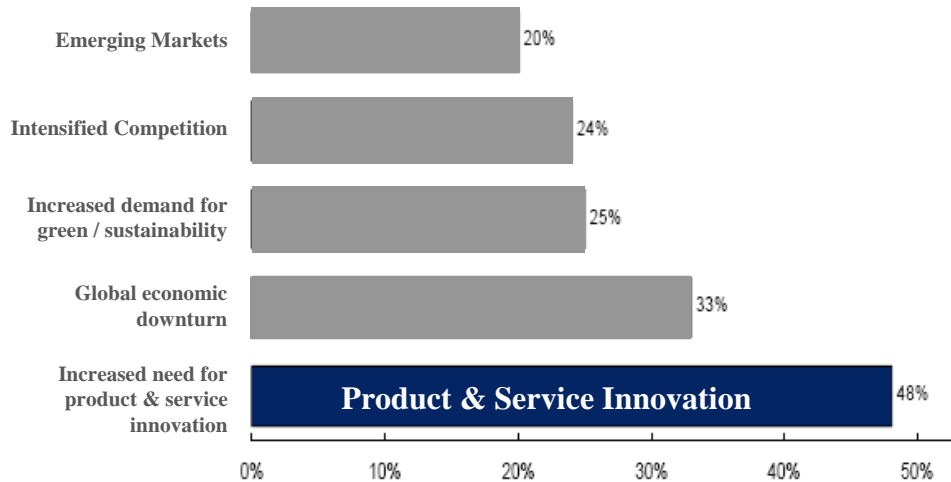
WIRED

India Emerges as Innovation Hub

CNN World

India's inventors seek markets in innovation decade

Businesses are Prioritizing Innovation for Growth

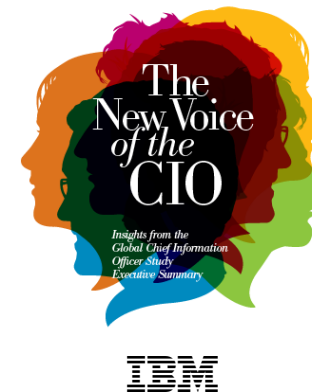


Source: Chairman's Series on Growth

F R O S T & S U L L I V A N

Partners with clients to accelerate their business growth strategies.. For nearly 50 years Frost & Sullivan has partnered with businesses from more than 35 offices on six continents.

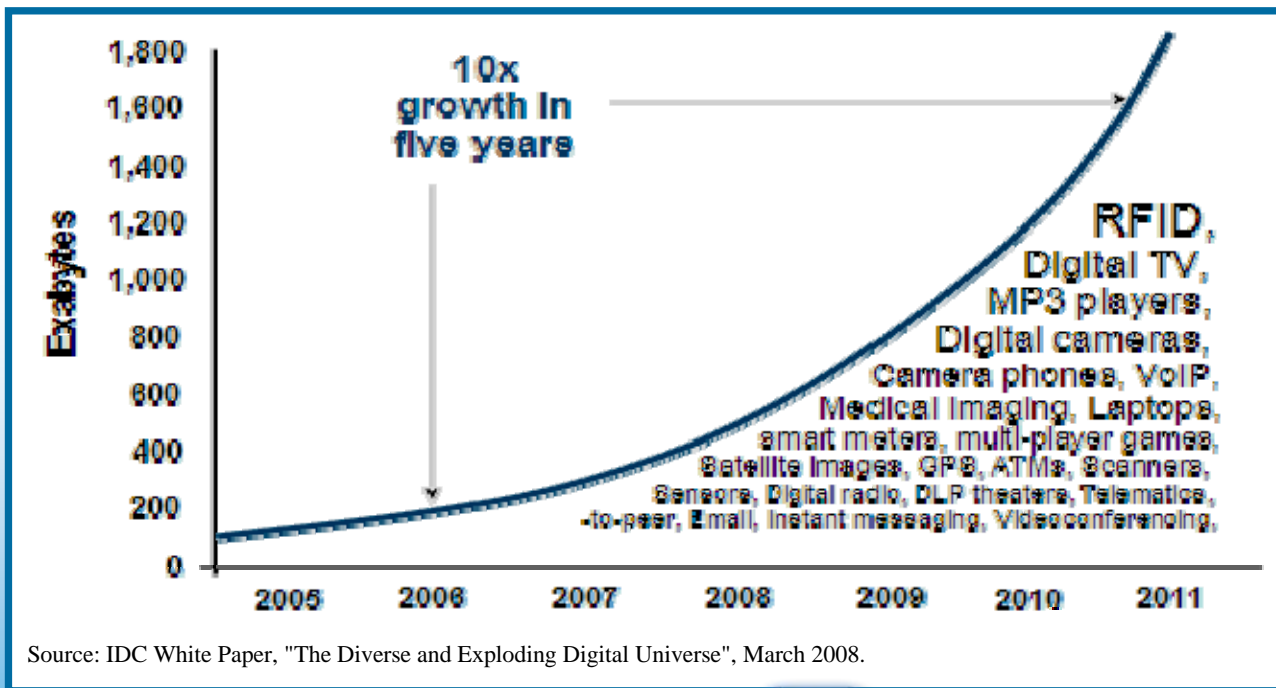
- **55%** of CIO time is spent on innovation
- High-growth CIOs are **94%** more involved in driving business innovation than low-growth CIOs



Innovation fueled by the “building blocks” of smart products & services



The world is becoming **10x** more instrumented with connected devices doubling to over **1 Trillion**



Source: IDC White Paper, "The Diverse and Exploding Digital Universe", March 2008.



New Value is being driven by Ecosystems of Intelligent “Systems of Systems” connected by Software



System of Systems

“Our planet’s system of systems carries inefficiencies totaling nearly US \$4 trillion”(1)

Internet

Worldwide Internet Users Top 1.3 Billion in 2007 (3)

(IT Software)

Embedded Systems

Exponential growth in embedded software creating new complexity(2)

(Embedded SW)

PCs

PCs In-Use Reached nearly 1.2B in 2008 (3)

(IT Software)

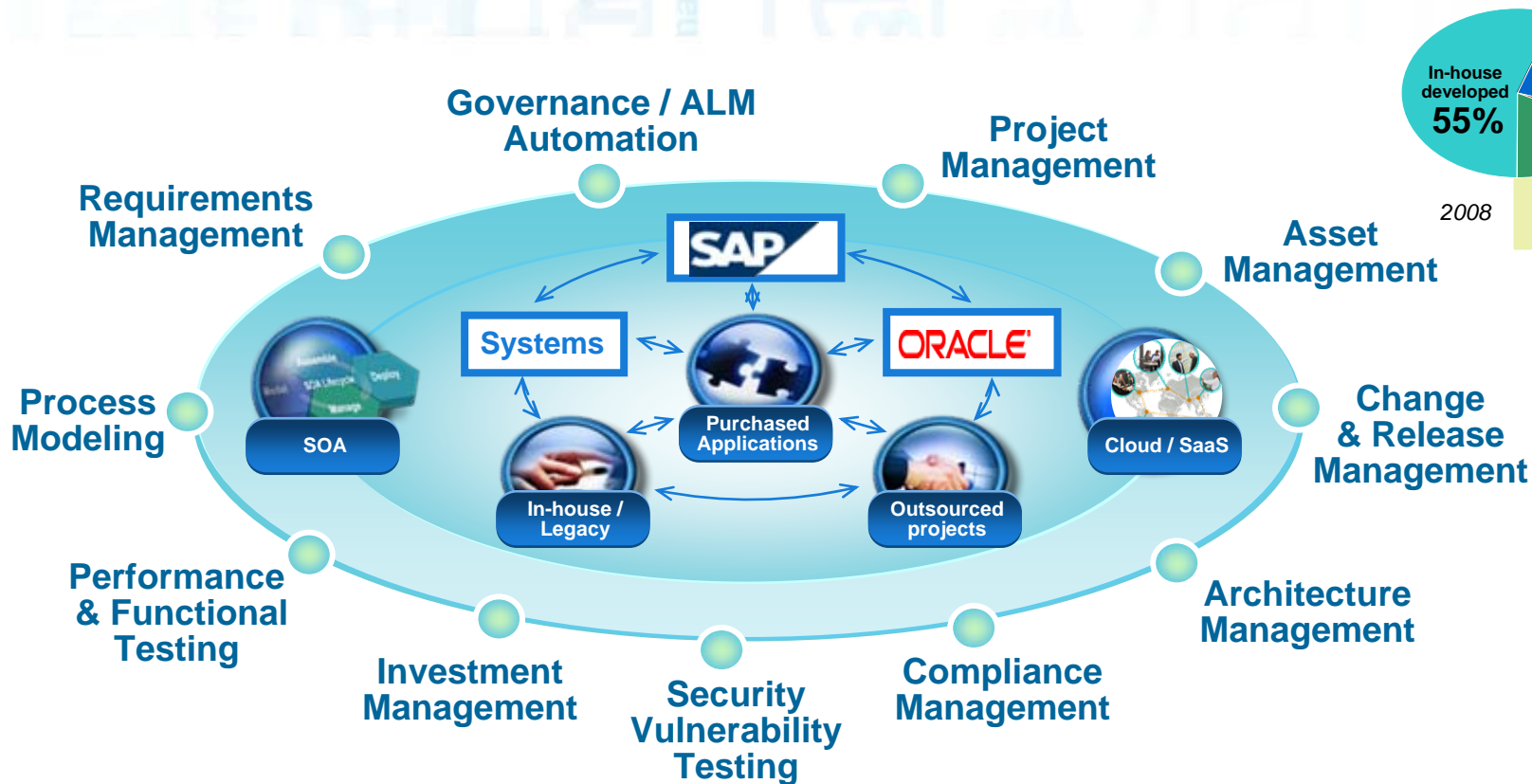
Mobile Devices

A Smart Phone now has as much software as Space Flight software(2)

(Embedded SW)

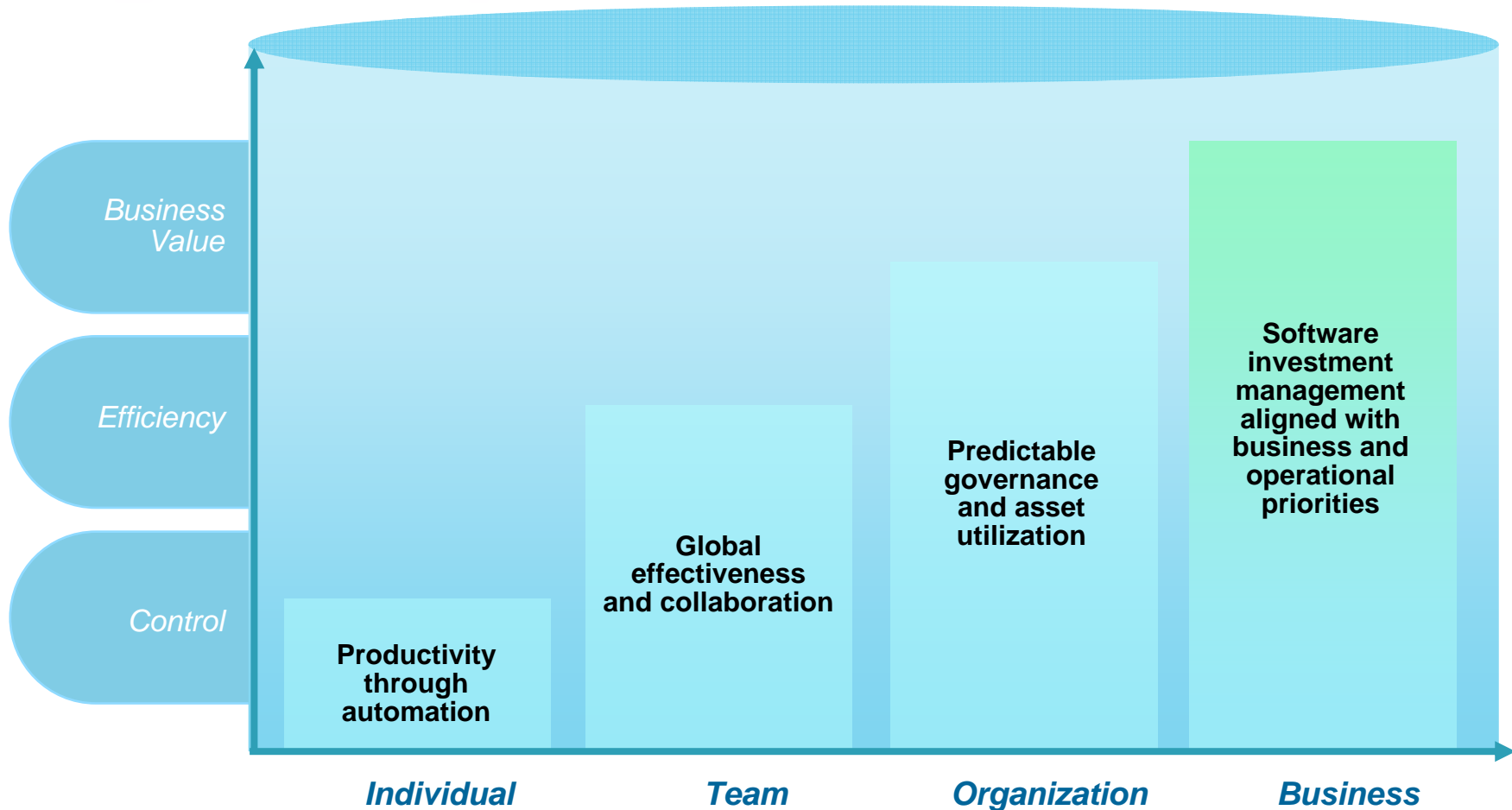
(1) Source: IBM Institute for Business Value (2) Source: Embedded Software: Facts, Figures, and Future, IEEE April 2009 (vol. 42) (3) Source: <http://www.c-i-a.com/>

The challenge is compounded by the reality of an ever-evolving “software supply chain”

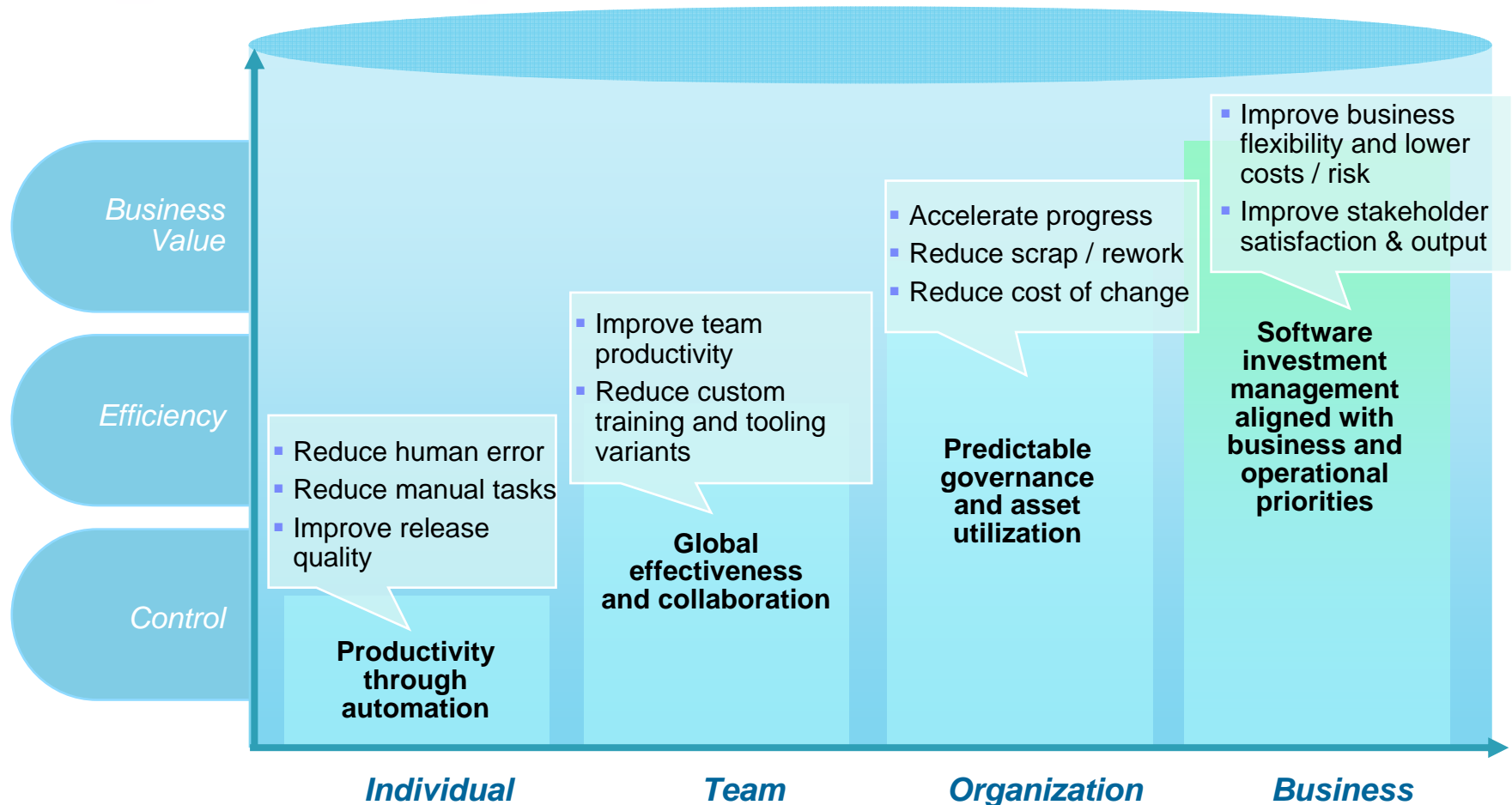


 **How do I control this new world to gain advantage?**

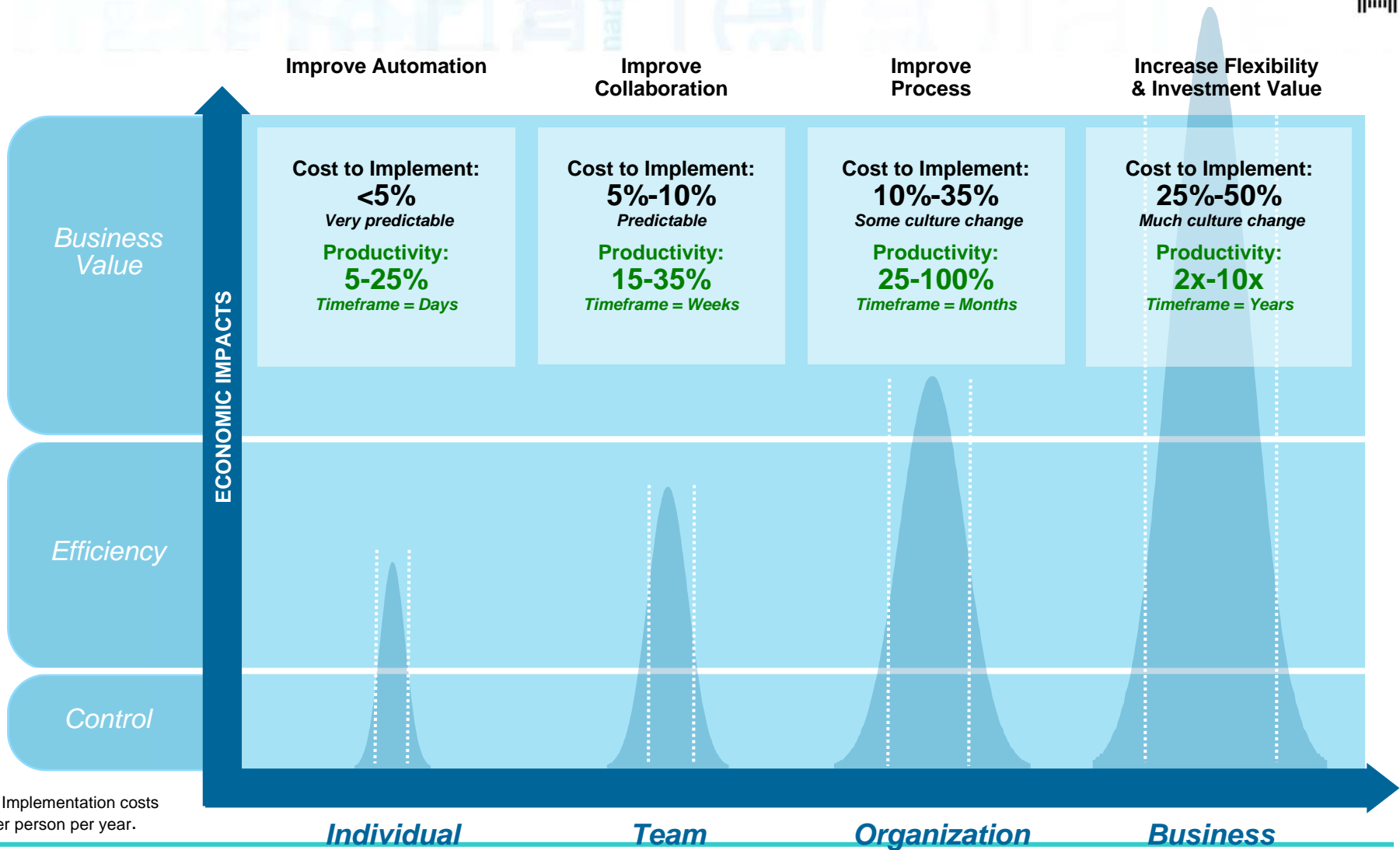
Success requires a maturing approach to managing software and systems delivery



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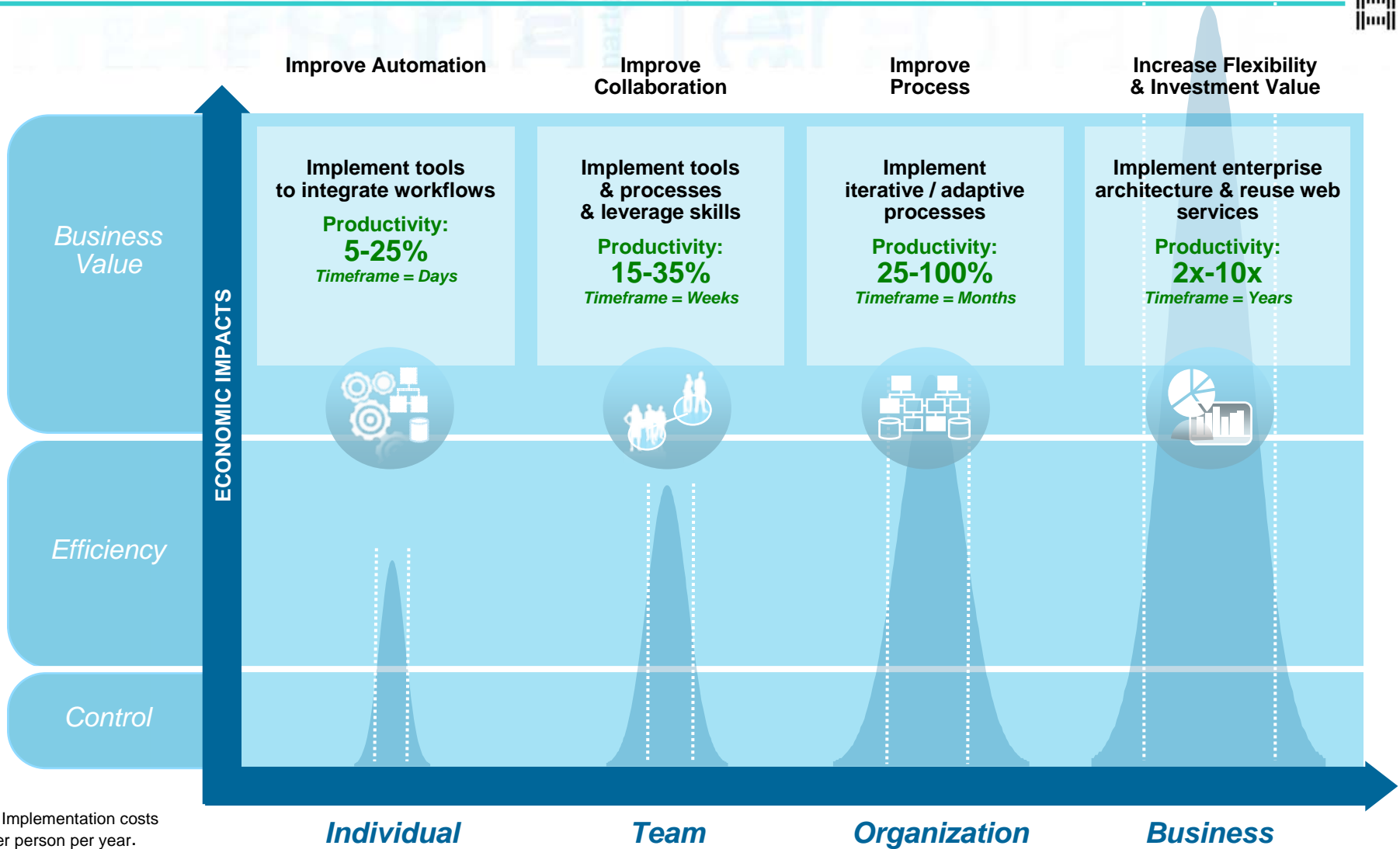


Invest across the spectrum of improvement to manage risks and increase productivity



Note: Implementation costs are per person per year.

Achieve continuous improvement against business outcomes



Note: Implementation costs are per person per year.

Most Innovative Companies 2010 and their business outcomes (and for the first time ever more from outside the US)



BusinessWeek

2010 Rank ▲	2009 Rank	Company	HQ Country	HQ Continent	Stock Returns 2006-09 * (in %)	Revenue Growth 2006-09 ** (in %)	Margin Growth 2006-09 *** (in %)
1	1	Apple	U.S.	North America	35	30	29
2	2	Google	U.S.	North America	10	31	2
3	4	Microsoft	U.S.	North America	3	10	-4
4	6	IBM	U.S.	North America	12	2	11
5	3	Toyota Motor	Japan	Asia	-20	-11	NA
6	11	Amazon.com	U.S.	North America	51	29	6
7	27	LG Electronics	South Korea	Asia	31	16	707
8	NR	BYD	China	Asia	99	42	-1
9	17	General Electric	U.S.	North America	-22	-1	-25
10	14	Sony	Japan	Asia	-19	-5	NA
11	16	Samsung Electronics	South Korea	Asia	10	17	-9
12	33	Intel	U.S.	North America	3	0	12
13	31	Ford Motor	U.S.	North America	10	-12	NA
14	8	Research In Motion	Canada	North America	17	75	-6
15	18	Volkswagen	Germany	Europe	8	0	14
16	7	Hewlett-Packard	U.S.	North America	9	8	9
17	13	Tata Group	India	Asia	Private	Private	Private
18	20	BMW	Germany	Europe	-8	0	NA
19	24	Coca-Cola	U.S.	North America	9	9	1
20	5	Nintendo	Japan	Asia	-8	22	3
21	10	Wal-Mart Stores	U.S.	North America	7	6	-1
22	NR	Hyundai Motor	South Korea	Asia	23	12	17
23	9	Nokia	Finland	Europe	-14	0	-37
24	34	Virgin Group	Britain	Europe	Private	Private	Private
25	12	Procter & Gamble	U.S.	North America	1	5	2

Source: http://bwnt.businessweek.com/interactive_reports/innovative_companies_2010/?chan=magazine+channel_special+report

The Measured Capability Improvement Framework (MCIF) offers a structured approach to driving innovation

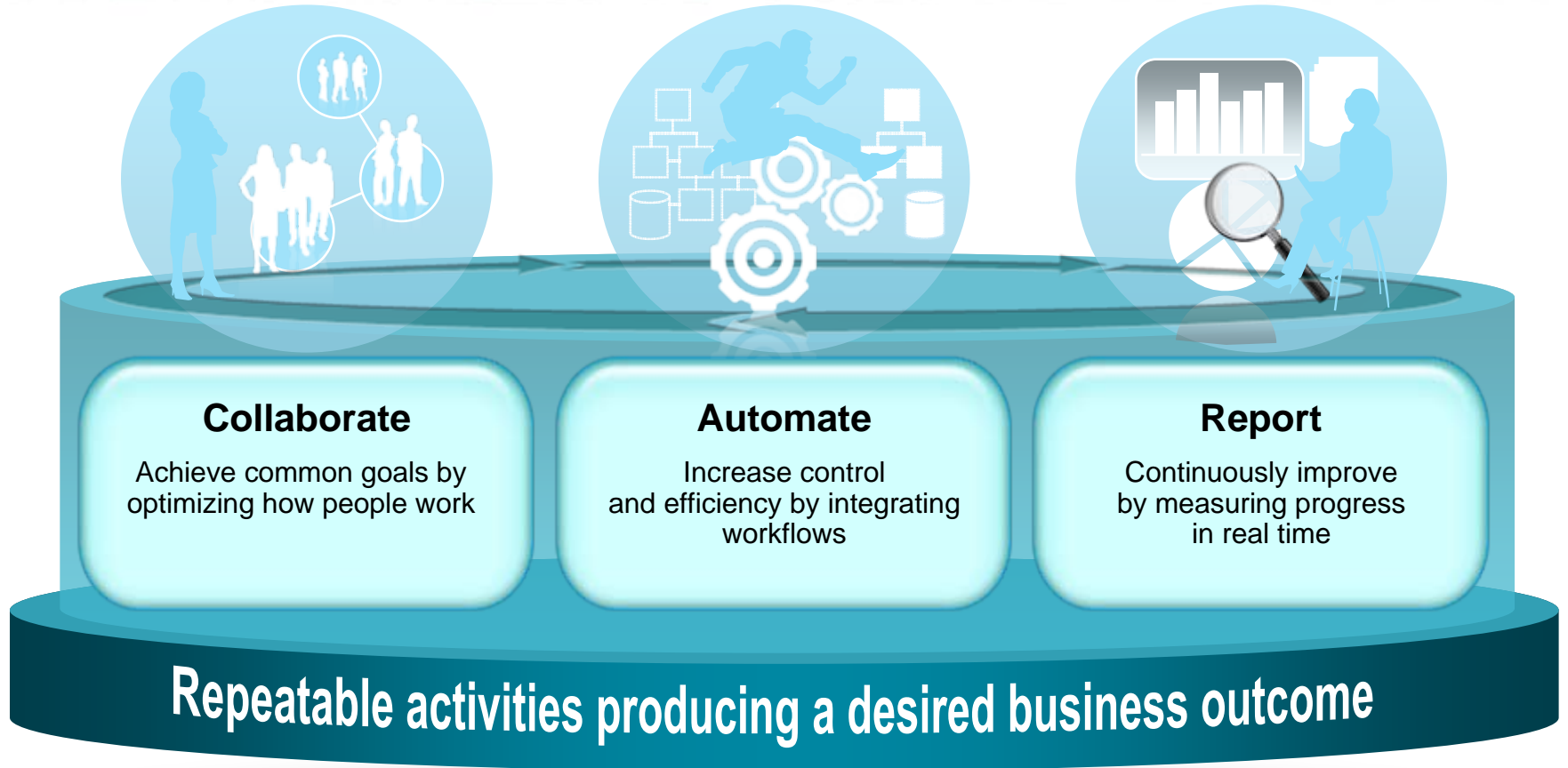


Encapsulates 25 years of experience helping teams incrementally improve their practice maturity to deliver business results

- MCIF can help you:
 - Adopt an incremental, measured approach to transformation
 - Focus on the core practices that matter most
 - Accelerate adoption through ready to use assets
 - Articulate capability improvements in terms of business value
 - Support any method, particularly optimization for agile practices



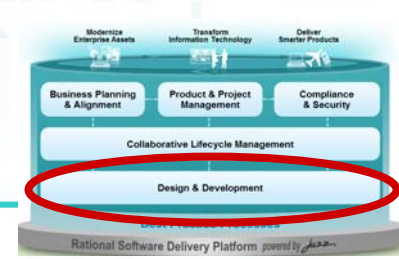
Successful businesses will manage software and systems delivery as a robust business process



Enabled by the Rational Software Delivery Platform & ecosystem



Design & Development: Ikerlan's Smarter wind power solutions



What's smart?

- Wind turbine systems that automatically optimize performance based on environmental factors
- Customized product variations that address the needs of a global energy market

Smarter business outcomes

- 90% reduction in development time for each customized wind turbine model
- 25% reduction in cost of development for wind turbine control systems

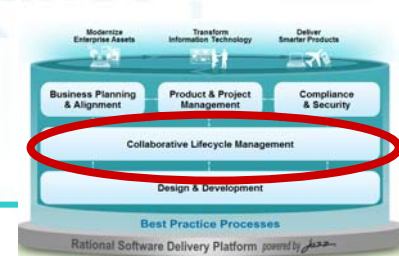
Innovating with IBM Rational:

- **Model driven development for optimization of wind turbine control systems**
- **Product line engineering to more efficiently produce software-based product variations**



*“Our use of Rational Rhapsody for model-driven development, integrated with BigLever Gears for product line engineering, allows us to **reuse software assets** and **manage variations** at a pace that lets us keep up with **market requirements.**”*

Collaborative Lifecycle Mgmt: *UPS & Eaton*



What's smart?

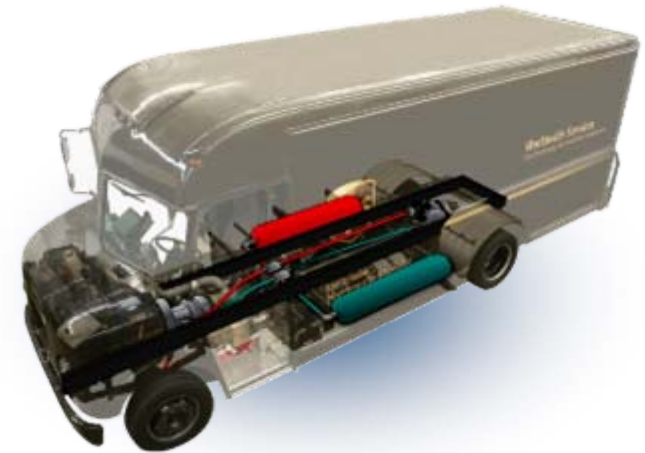
- Innovative technology for urban delivery trucks in stop-and-go traffic
- Smart software to optimize energy usage and reduce greenhouse gases

Smarter business outcomes

- 60-70% increase in fuel economy, according to EPA
- 40% reduction in CO₂ emissions

Innovating with IBM Rational:

- **Software modeling to optimize system performance**
- **Automatic generation of in-vehicle software code**



“The suite of Rational tools, including Rhapsody, DOORS, ClearCase and ClearQuest, provides Eaton an integrated software framework that allows us to deliver innovative products more quickly and efficiently.”

Business Planning & Alignment: A Smarter Airport Terminal



What's smart?

- Seamless check-in, with 96 check-in kiosks designed to eliminate queuing
- State-of-the-art baggage handling with advanced tracking

Smarter business outcomes

- Avoided several thousand design assumptions which is estimated to have saved up to £40 million over 7 years

Innovating with IBM Rational

- **Rigorous requirements and audit process to manage design assumptions, handle test information and demonstrate compliance with internal criteria and external regulations**
- **Requirements linked to physical assets in IBM Tivoli Maximo for tracking, impact analysis and defect analysis**



*“Rational DOORS has supported our processes across the development life cycle and helped us **reduce project risks and development costs**. By managing design assumptions, avoiding potential errors and deficient functionality, our teams were able to **deliver projects on time, within budget and compliant with customer and business requirements.**”*

Product & Project Management: Daimler FleetBoard



What's smart?

- Smart end-to-end system optimizing vehicle usage and routing
- Innovative technology for advanced telematic solutions

Smarter business outcomes

- 5-10% reduction in fuel consumption due to optimized vehicle management
- 10% reduction in telecommunications costs due to increased automation

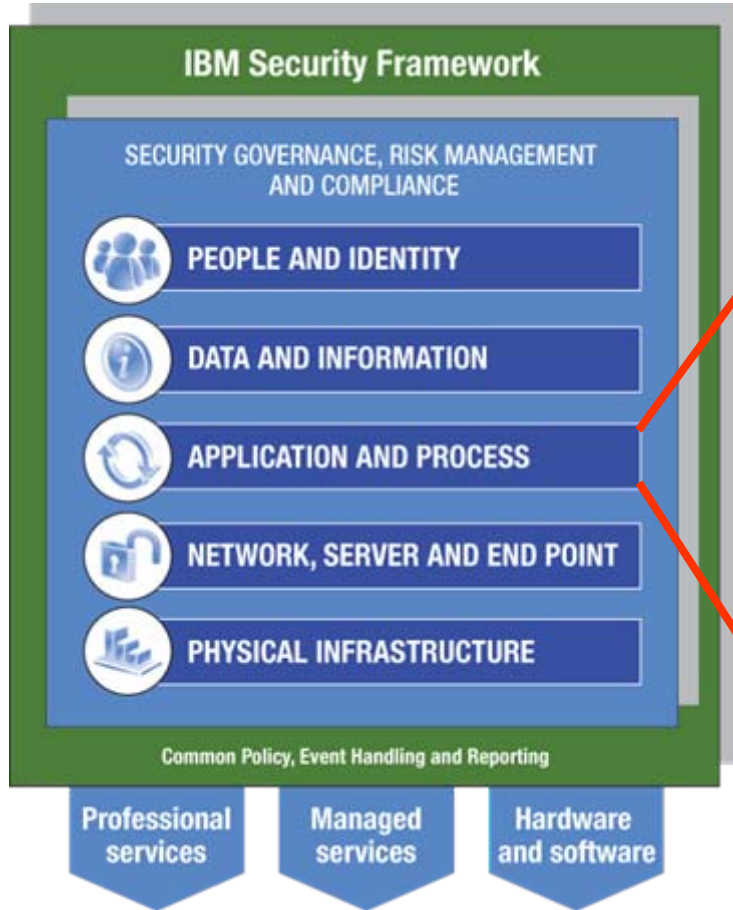
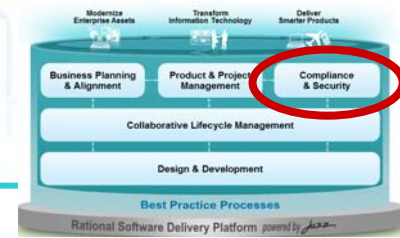
Innovating with IBM Rational

- **Improved collaboration in the product portfolio planning process**
- **Automated release planning balancing cost, risk and reward**



"IBM Rational Focal Point helps us discover the optimal set of customer features and balance those against the needs of our business, allowing us to deliver continual enhancements to our telematic solution."

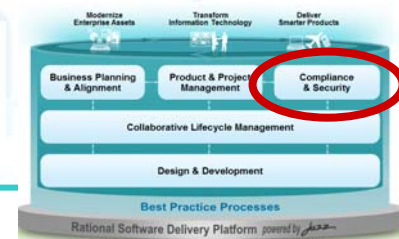
IBM: Comprehensive Security Risk & Compliance Management



IBM Rational Appscan
Ensure vulnerabilities are addressed before applications are put into production



IBM: Comprehensive Security Risk & Compliance Management



Best security company

March 02, 2010

Winner: IBM

www.ibm.com/security

IBM has been an industry leader for nearly 50 years, helping CxOs and IT professionals secure their corporate infrastructures with solutions that go beyond just collections of niche products. IBM's customers rely on the planet's most secure databases, applications, operating systems, storage and servers. IBM offers comprehensive security solutions and services addressing compliance, applications, data, identity and access management, networks, threat prevention, systems security, email, encryption, virtualization and cloud security.

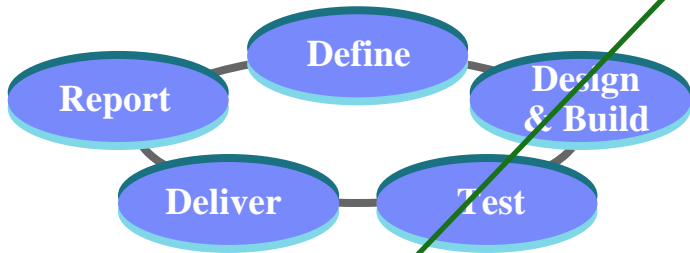


Bridging the Design, Delivery and Management Processes

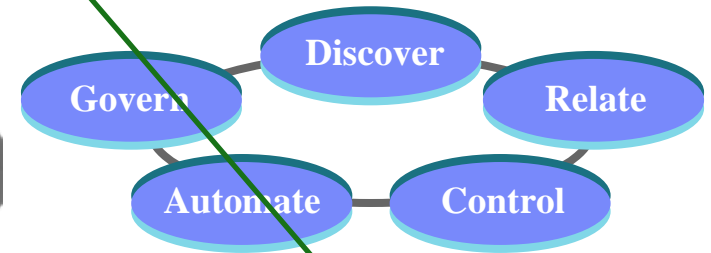


Enterprise Level Business Planning & Technology Alignment

Design & Delivery Processes



Service Delivery, Support & Operational Processes



Partner with IBM and benefit from the advantages of Product & Service Innovation



✓ 30-47% reduction in development costs

✓ Reduce aircraft fuel consumption and CO2 emissions by up to 25%

✓ 60% increase “on time & budget project delivery”

✓ 60-70% increase in automotive fuel economy

✓ 25-60% reduction in application services TTM

✓ 40% reduction in automotive CO2 emissions

✓ \$400M expected 5-year revenue growth

✓ 10% reduction in telecommunications costs due increased automation

✓ 5-year cost savings \$246M

✓ 30% reduction in time to market

✓ Inventory carrying costs down by 5-20%

✓ Reduced software debug time by 75%

✓ Lost warranty recoveries up by 10-50%

✓ Achieved ROI in 5 months with annual savings of \$1M

✓ Increased planned maintenance by 50-80%

✓ Faster technology delivery as a result of 50% reuse of software components

✓ Asset utilization up 3-5%

✓ 69% net reduction in the cost of test preparation, testing and rework

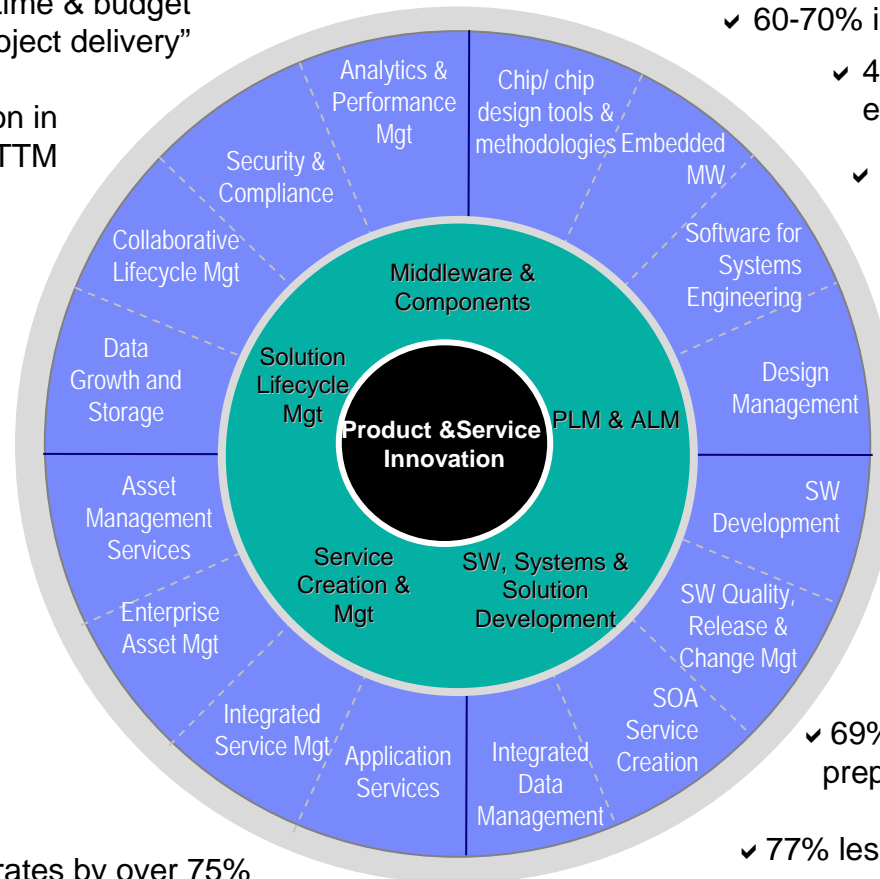
✓ 10-20% increase in labor utilization

✓ 77% less defects after production

✓ Reduced defect rates by over 75%

✓ Reduced systems engineering cycle time from 6 months to 6 weeks

✓ Increased productivity by more than 40%



Innovate with IBM now...

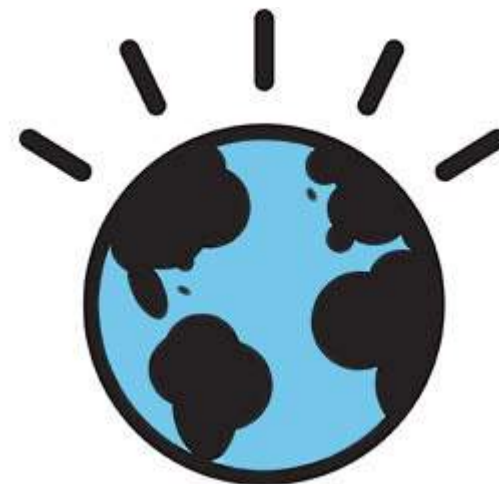
1. Get started with an MCIF assessment workshop

2. Get connected with your local team:

sodsouza@in.ibm.com

3. Get involved at

www.jazz.net/



**Thank
You**