

# La Journée Technologique

13 janvier - Bois Colombes



**DATA CENTER : nouveaux enjeux, nouvelles solutions**

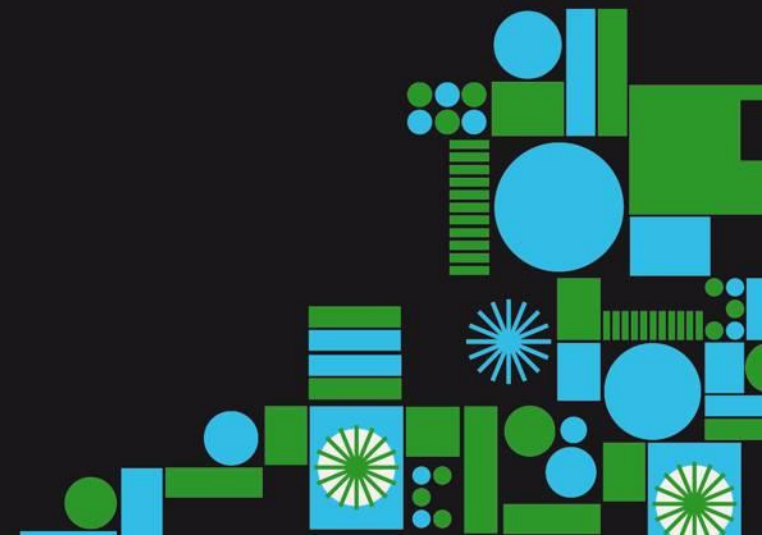
Smarter Computing  
Better Economics and Business Velocity  
*The Collapsibility Factor*

***Ambuj Goyal***

General Manager

Development and Manufacturing

IBM Systems & Technology Group



# On a Smarter Planet, IT Leaders Must Innovate to Address an Insatiable Demand for New Capacity & Capabilities



## Regional Healthcare Provider

Multi-year IT transformation, Doubles capacity; flat budget...

...avoids building a new \$80M data center

***So that this healthcare provider can now:***

Utilize EMR data to implement a Smart Hospital Room...

...and reduce nurse documentation workload 57%

## Global Insurer

Data center infrastructure rationalization project...

...60 servers collapsed to 1; Reduced power needs 10 fold

***So that this insurer can now:***

Cost effectively grow their computing capabilities...

...while reusing skills & data center located in the same metropolitan footprint

## Large Retailer

Multi-year store transformation optimizing store systems...

...while reducing operating expenses by ~70%

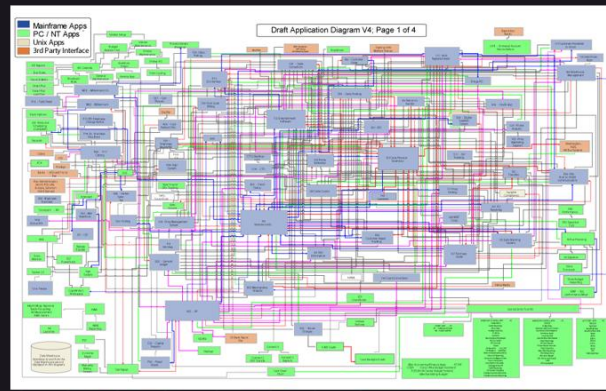
***So that this retailer can now:***

Implement new stores more rapidly...

...differentiating their stores to grow loyalty & revenue



# Systems Infrastructures have become Inflexible, Slowing Business Velocity & Increasing Cost



*In-place Upgrades...*

*Legacy Systems...*

*ISV Infrastructures...*



# Systems Infrastructures Today

Pressure from all sides...



## Line of Business

*“Deliver my new application, quickly...”*



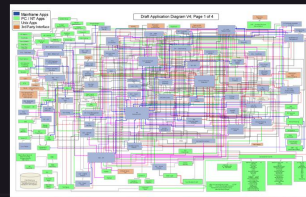
### Vendors

*“Standardize...”*

*“Appliances...”*

*“Commoditize...”*

*“Cloud...”*



### CFO

*“Reduce cost.*

*Use what  
you have.*

*Reduce cost...”*



### Consultants

*“Strategy and change...”*



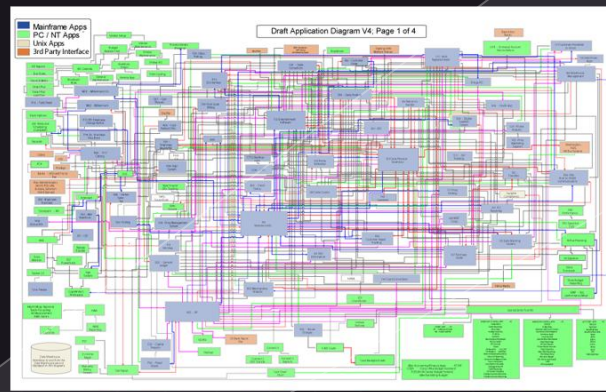
# Rapid Reuse Remains the Driving Force for Optimizing Data Centers



*Rapid Reuse*

*Business Velocity*

*Economics*

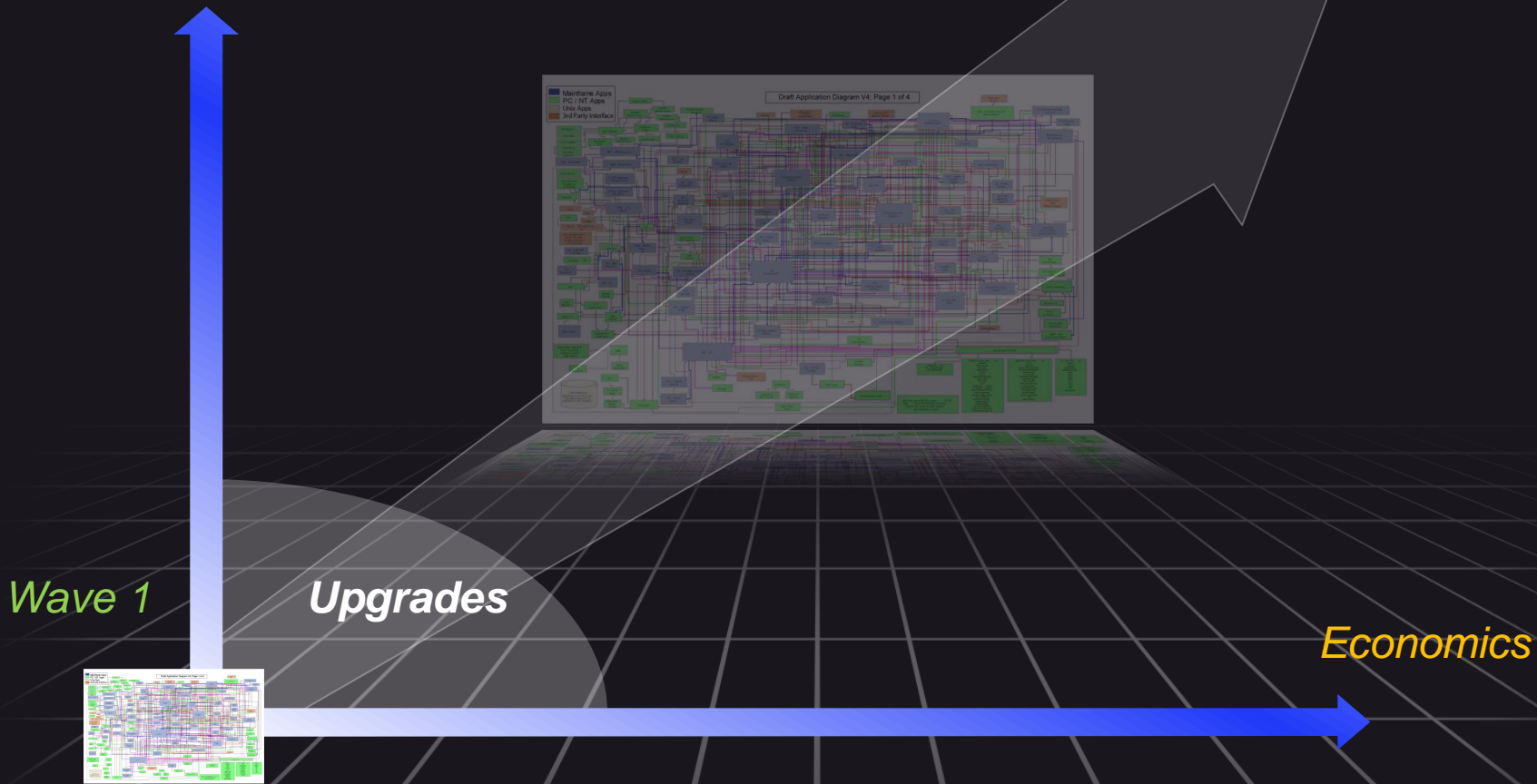


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*Rapid Reuse*

*Business Velocity*



# Rapid Reuse Remains the Driving Force for Optimizing Data Centers



*Rapid  
Reuse*

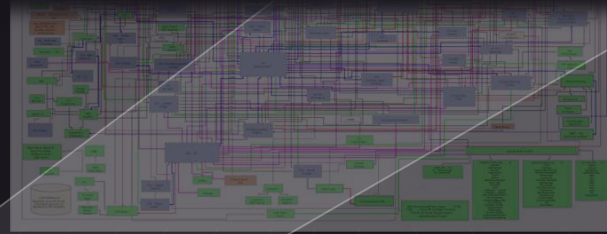
*Business Velocity*

...**Collapse** the number of components, thus **Reduce the  $N^2$  effect** related to networks, cards, wires, chassis, OS's, systems and network administration; while **Leveraging & Reusing** investments in existing applications, skills & software licenses, and improving overall server, storage and network utilization...

*Wave 1*

*Upgrades*

*Economics*



# Wave 1: Upgrades

## Reusing Licenses & Skills



### *Growth Drives Capacity Needs*

- Large Complex of Unix Servers
- Implemented Micro-partitioning & CPU sharing
- Utilization jumps to 80%, nearly doubling
- 162 Unix Servers Converged to 14
- 1,200 Wintel Servers to 22



Regional Healthcare  
Provider

### *Performance for Real-time Analytics*

- Mobile internet behavior & advertising exposure analysis
- Analyze 100s of millions of website URL's daily; 23.3 people with Internet capable mobile handsets in France
- Detailed data available at 10GB/Second;
- "The x3850 X5 gave us much more horsepower & a smaller footprint..."



Qosmos



GfK



IBM eX4  
to eX5



# Wave 2: Virtualization Multi-environment

## Reusing Assets



**Rapid  
Reuse**

*Business Velocity*

Wave 2

Wave 1

**Virtualization**  
(Multi-environment)

+

**Upgrades**

*Economics*

Reusing investments in applications, skills,  
software licenses and capital



# Wave 2: Virtualization Multi-environment

## Reusing Assets



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Wave 2

**Virtualization**  
(Multi-environment)

+

Wave 1

**Upgrades**

*Economics*

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# Wave 2: Virtualization Multi-environment



## Reusing Assets

### 60 Linux Servers to Just One

- Consolidates Linux Clutter
- Reduced Costs: paid for in ~1 year
- kVA power down from ~40 to 4
- Minimum disruption in cutover

### Cloud Delivery Drives Utilization Needs

- 10,000 Cloud Servers of >23K Servers
- Windows & Linux Architectures
- 70% Utilization Rates vs. Single Digit Utilization of traditional delivery model
- eX5 Independent Memory helps drive utilization;
- SVC enables storage sharing for improved storage utilization



IBM  
System z



IBM  
System x

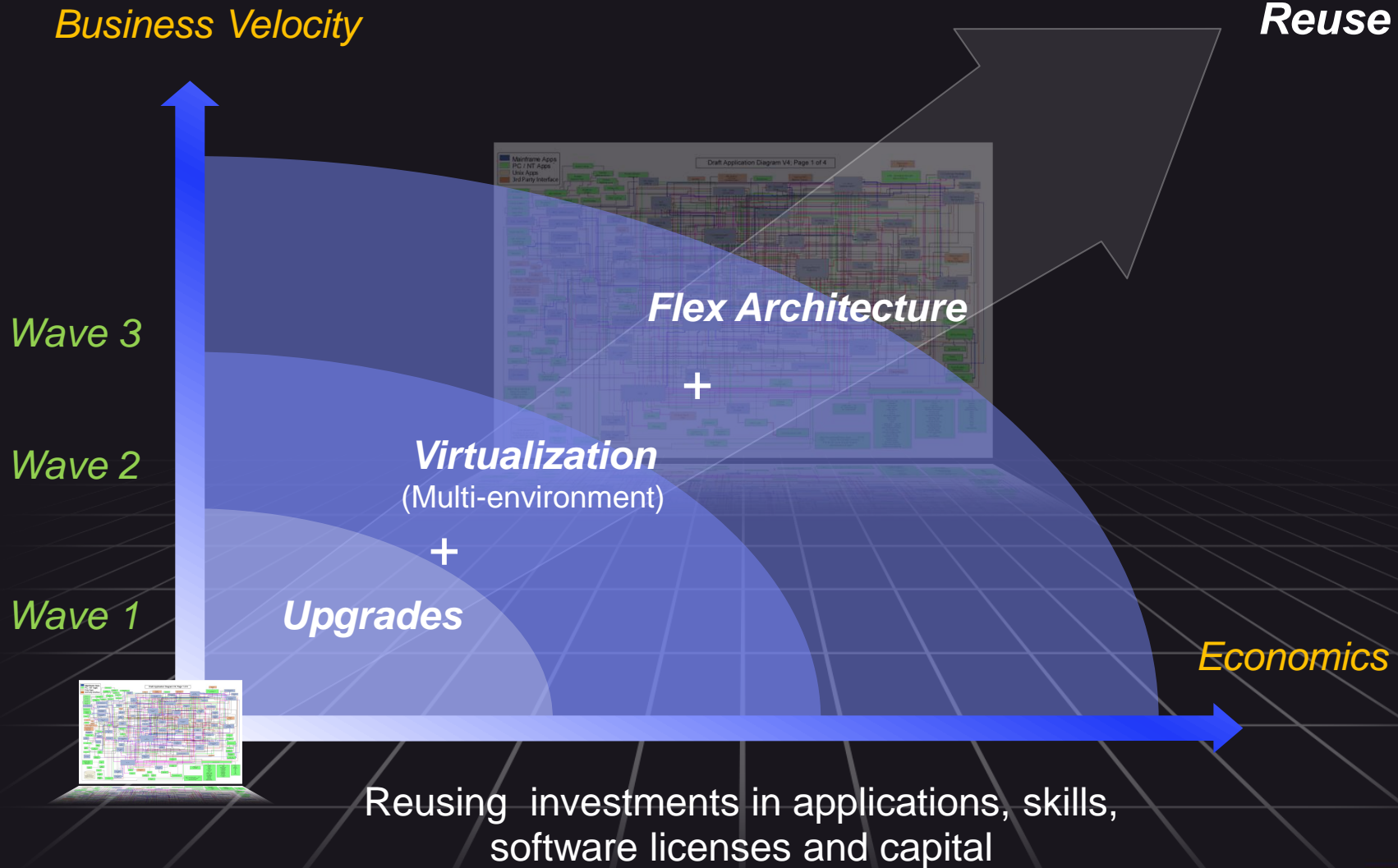


# Wave 3: Flex Architecture

## Reusing Assets Without Forced Migration



**Rapid  
Reuse**



# Wave 3: Flex Architecture



## Reusing Assets Without Forced Migration

...IBM offers **consolidation without a forced migration**; using flex-architecture racks using flex-architecture racks **reduces our time to deliver critical systems in approximately half...**  
*Global Shipping Conglomerate*

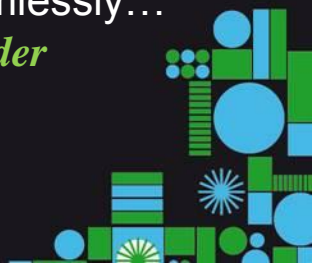
...Their [IBM's] flex-architecture rack **reduced our operating budgets by ~70%**. We can deploy new applications faster & reuse funds to grow our business...  
*Large Retailer*

...IBM investment in **flexible IT** systems allowing rapid reuse is not only intriguing and delivering **huge value** for their clients, but it could change the way data centers are designed & make them **future proof...**

*Industry Analyst*

...When ever I want to **reuse my under utilized storage for new applications**, I just ask IBM to use some of its SVC magic to our multi-vendor storage environment...  
*Leading Healthcare Provider*

...I leverage i-Flow & systems networks from IBM across my cloud centers... it **saves costs** and allows me to re-use multiple versions of hardware seamlessly...  
*Cloud Services Provider*



# Wave 3: Flex Architecture

## Reusing Assets Without Forced Migration



**Rapid  
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Wave 3

**Flex Architecture**

Wave 2

**Virtualization**  
(Multi-environment)

Wave 1

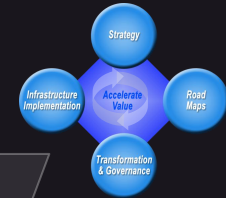
**Upgrades**

*Economics*

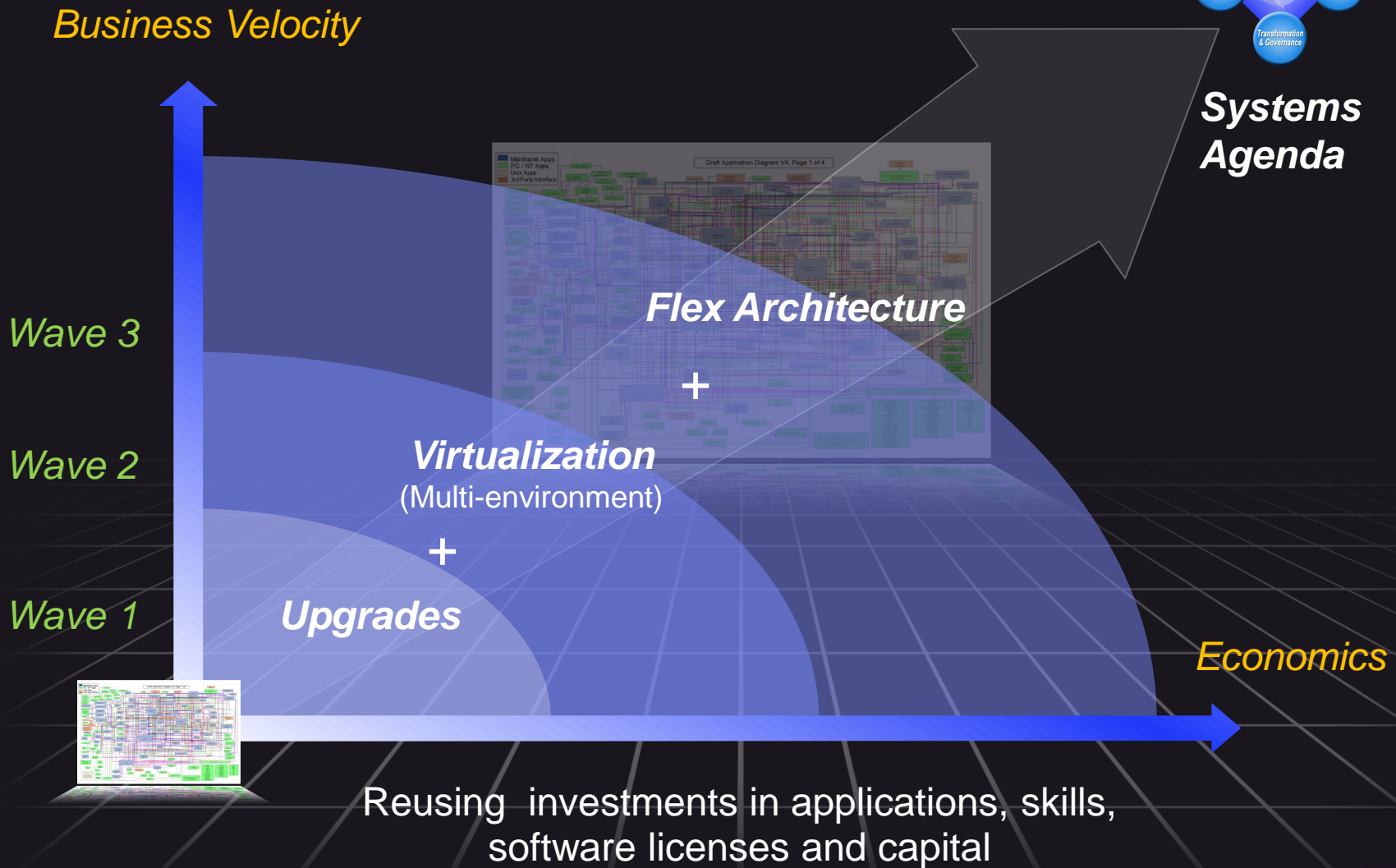
Reusing investments in applications, skills,  
software licenses and capital

# Optimizing Systems for a Smarter Planet

## Systematic Use of **All** Three Waves



**Systems  
Agenda**



# Unlocking the Value of Overall Systems Spending



## Transforming IT at a leading healthcare provider

### *Challenges*

IT & Business Disconnected  
Information Growing 125% YTY  
4,800 Servers; 75,000 Desktops  
100s of Configurations



# Unlocking the Value of Overall Systems Spending



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Accelerated Server Consolidations; New Data Center Need Delayed...

25 Doctors & 25 IT Professionals Meet Quarterly to Measure & “Starburst” Value

1.

Created a Joint Business/IT Strategy

2.

Created Value Road Map; Developed Organizational Recommendations

4.

3.



# Unlocking the Value of Overall Systems Spending



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**One Strategy**  
“Centralized Storage Utility”...  
Unified Service Desk...  
< 500 Servers...  
Cost Avoidance...



# IBM Helps Create an Overall Systems Agenda for Our Clients

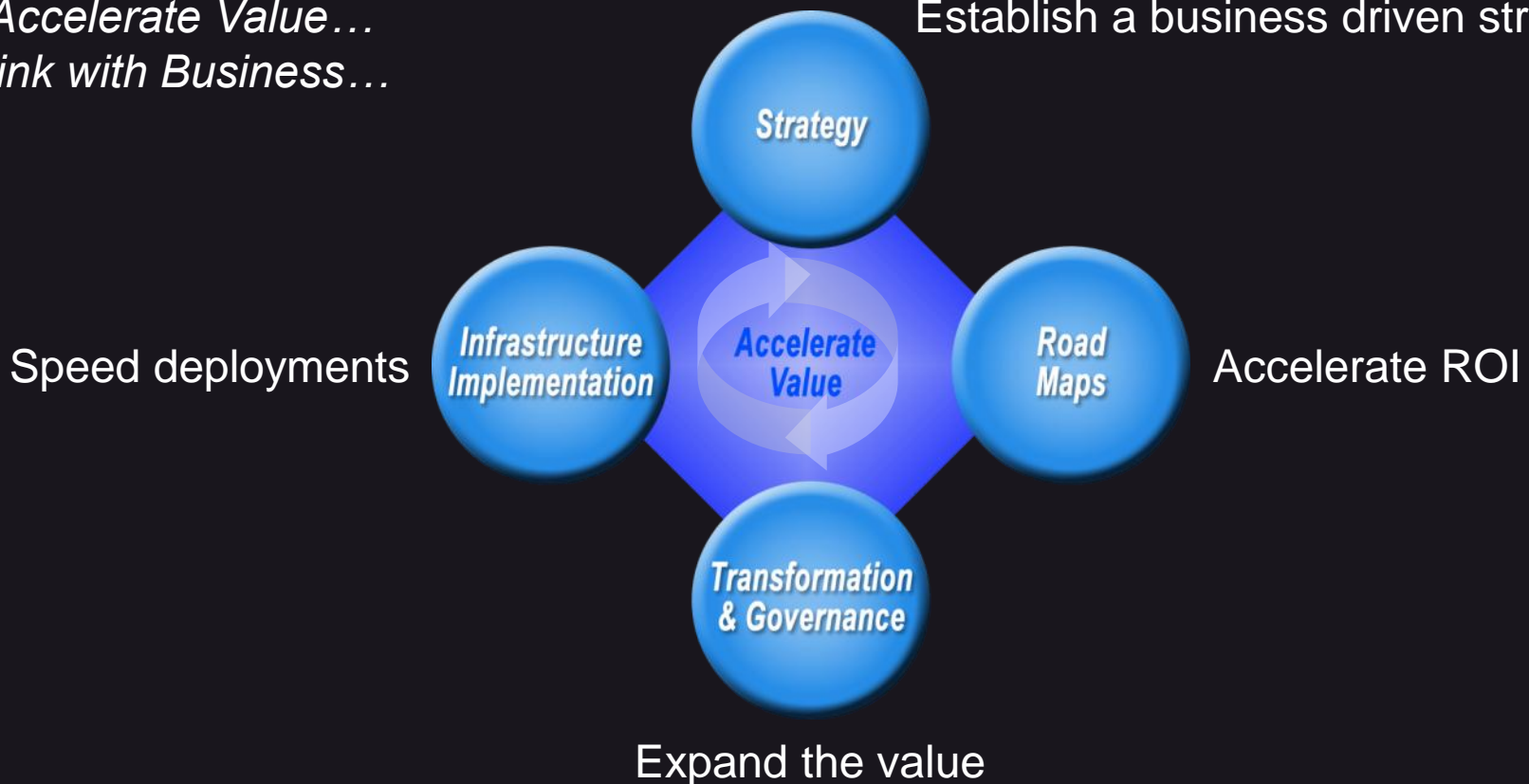


## Unlocking the Value of Overall Systems Spending

### *IT Transformation*

*Accelerate Value...  
Link with Business...*

Establish a business driven strategy



# Innovation is Needed at All Levels

Technology, platforms, systems, experts



Software

Systems



Research

*Enabling Our Clients Strategic Business Needs*



*Fully Refreshed Portfolio in 2010*



# Smarter Computing

Better Economics and Business Velocity

*The Collapsibility Factor*



Systems infrastructure has become inflexible, slowing business velocity & increasing cost...

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IBM unmatched investments in servers, software, storage and systems drives innovation...

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...optimizing economics & business velocity by *Improving the Collapsibility Factor and IT Flexibility*

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# Merci !!!

