

CICS and the Cloud, Mobile and Big Data

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Abstract

- This session will review the benefits of Cloud Computing and Enterprise Services and discuss how the principles can be applied to the mainframe. The topics will focus on technology but will also discuss some of the cultural habits and assumptions that may need challenging to fully realize the benefits. We will discuss how the latest version of CICS TS introduces cloud-style CICS development, deployment, and operations, providing you with greater service agility, as well as discussing how CICS can play a central role as the industry develops in the areas of mobile and big data.

Agenda

- Overall CICS market dynamics
 - Value, cost, complexity
- CICS and Cloud
 - The evolution from service enablement to cloud enablement
 - Investments and technology
- CICS and Mobile
 - How big is Mobile for CICS?
 - Investments and technology
- CICS and Big Data
 - How does CICS fit?

Focus on solving three key customer challenges

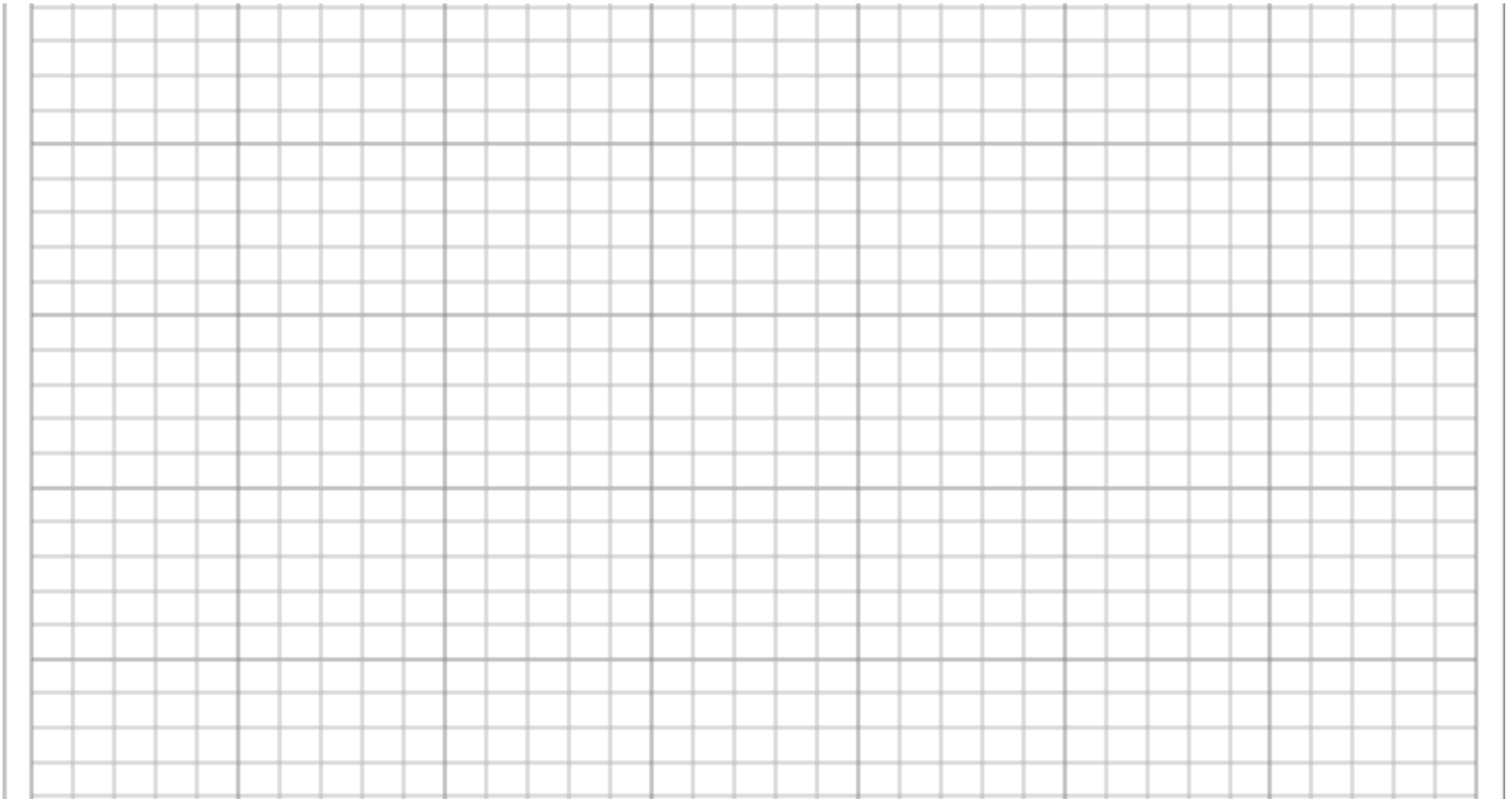
- Ongoing operational pressure to drive down costs and improve efficiency
- Increased business pressure to deliver faster and with greater agility
- Ability to manage and exploit the rapidly changing technology landscape

*Operation Efficiency:
Controlling cost*

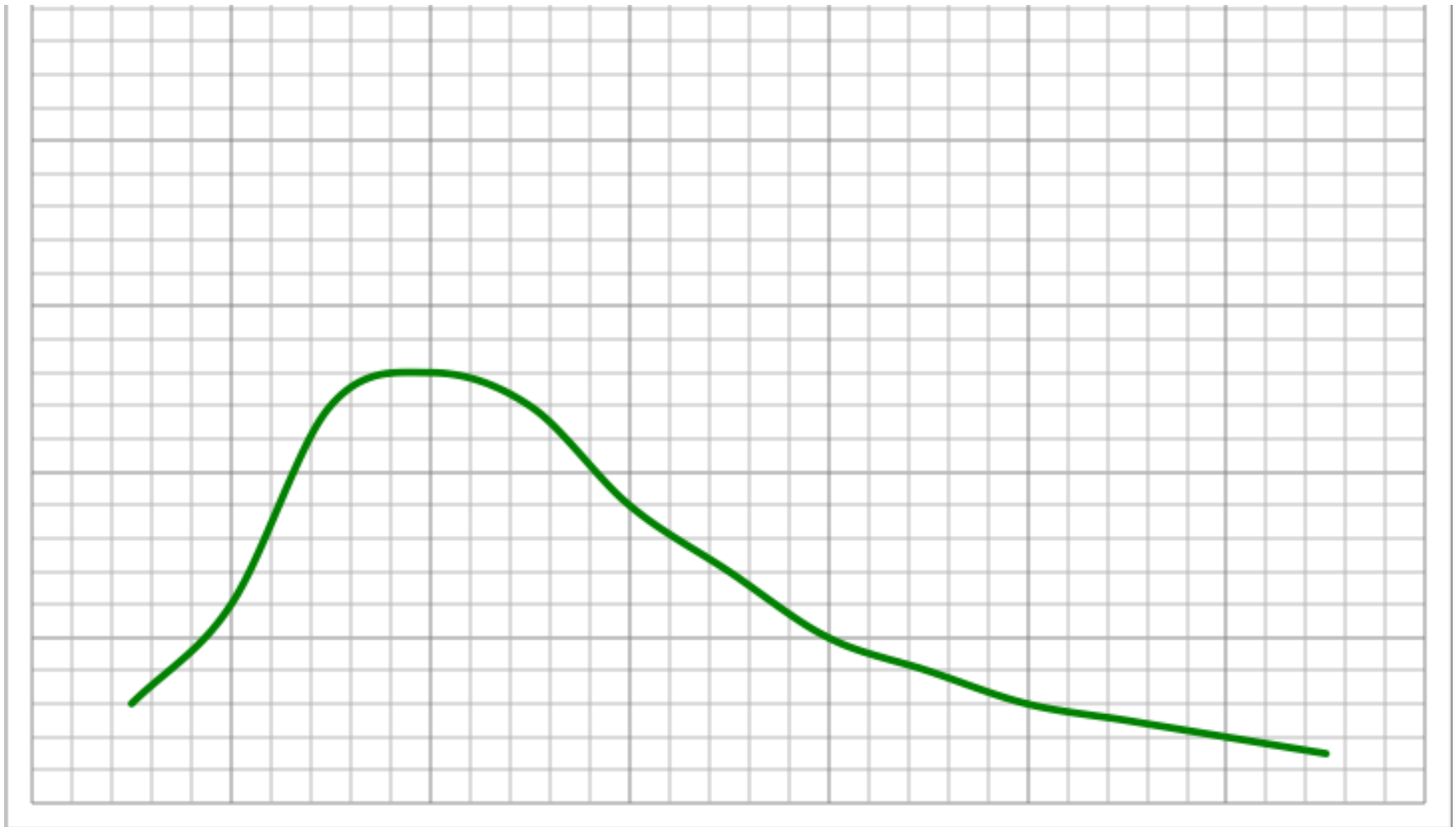
*Service Agility:
Deliver results faster*

*Cloud Enablement:
A long term investment*

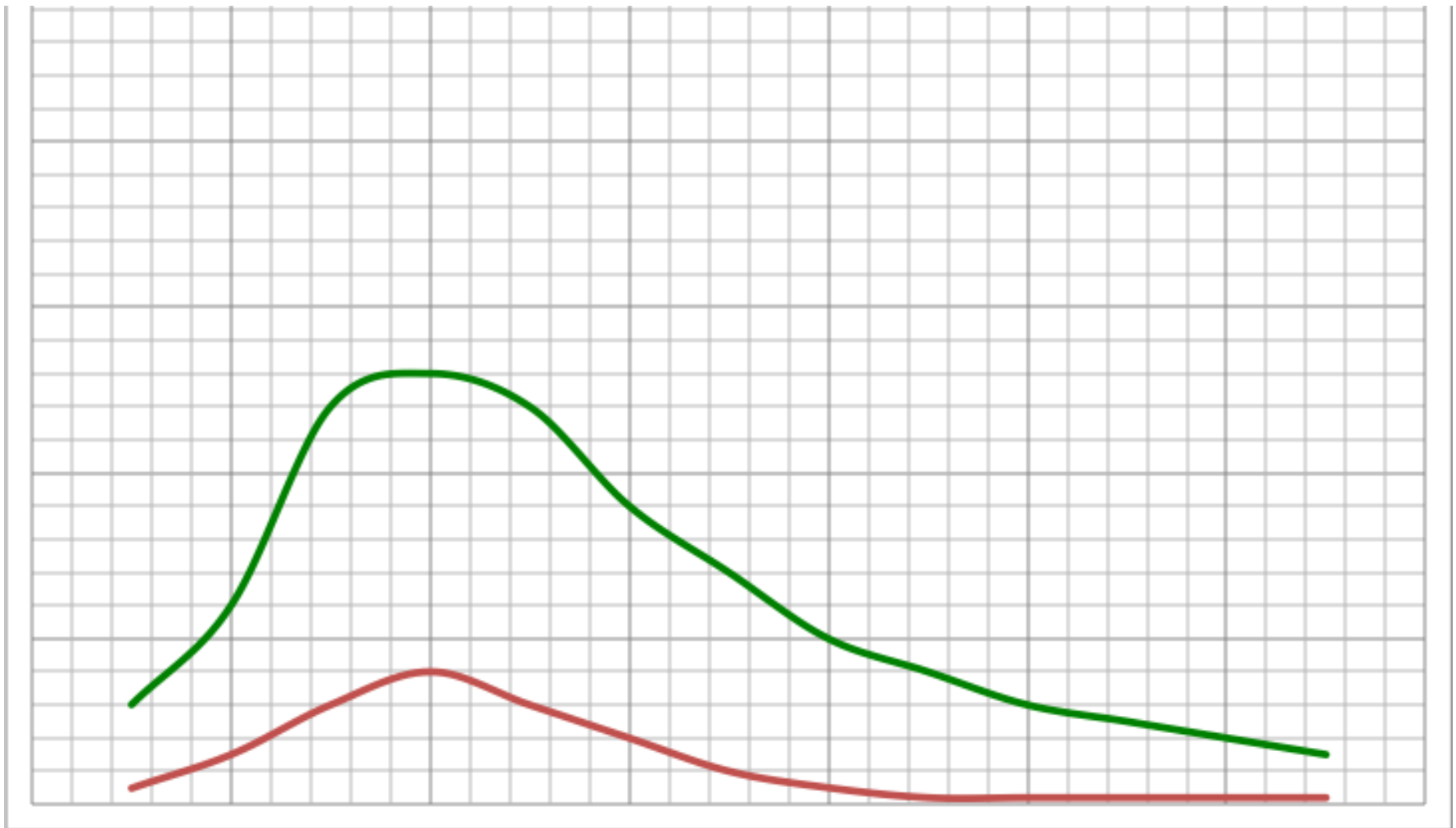
Value, cost and complexity waves



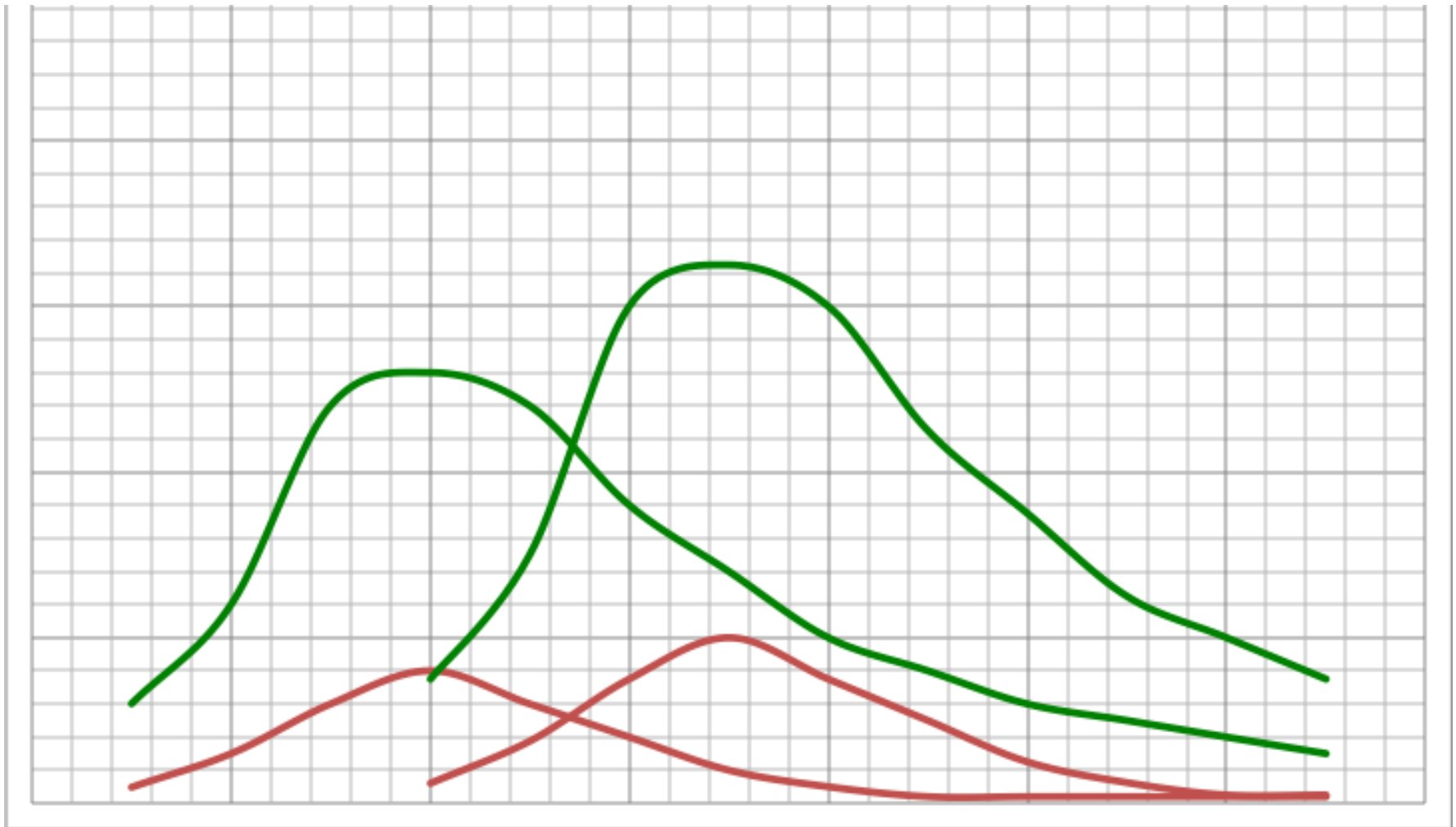
Value, cost and complexity waves



Value, cost and complexity waves



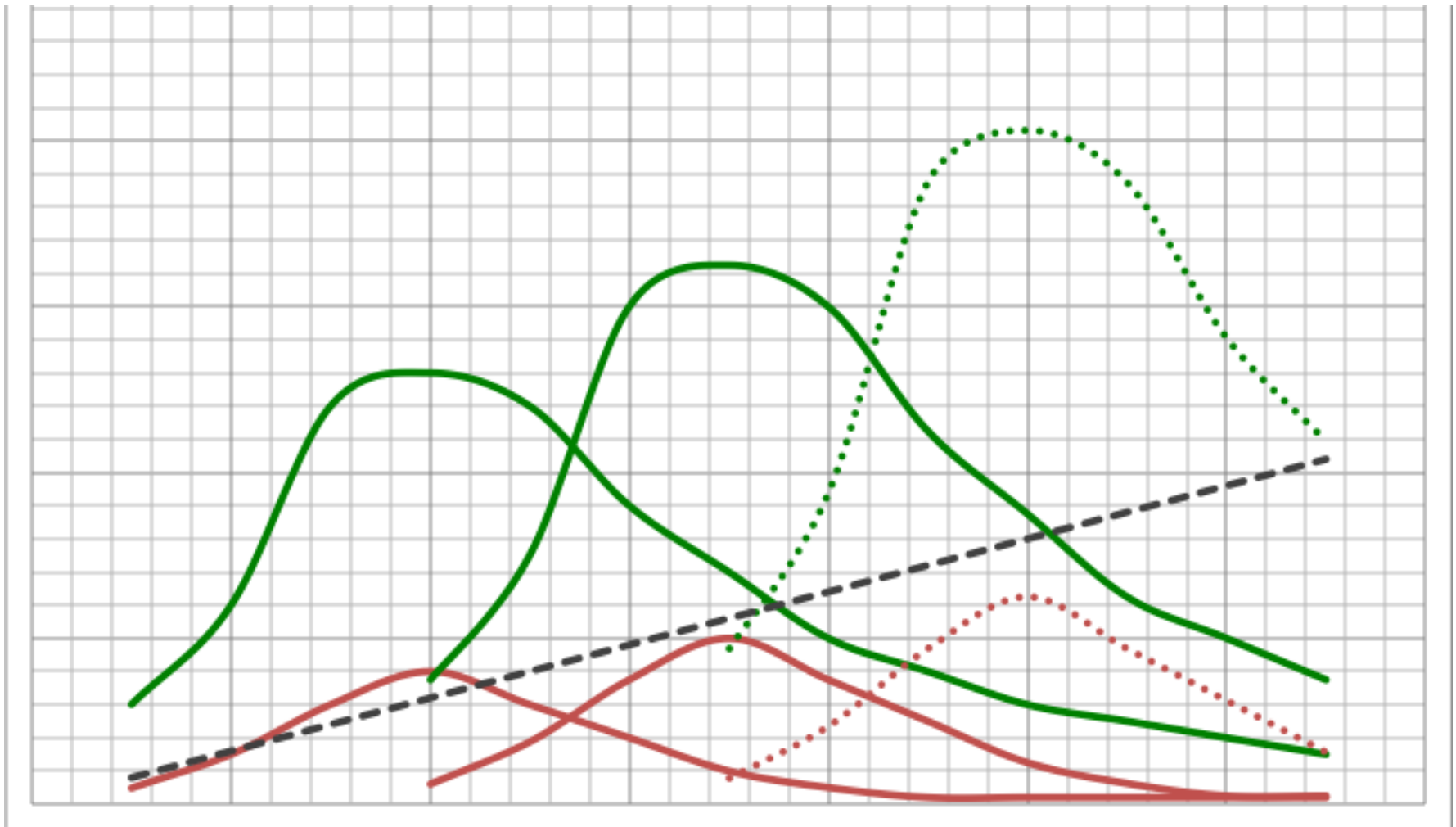
Value, cost and complexity waves



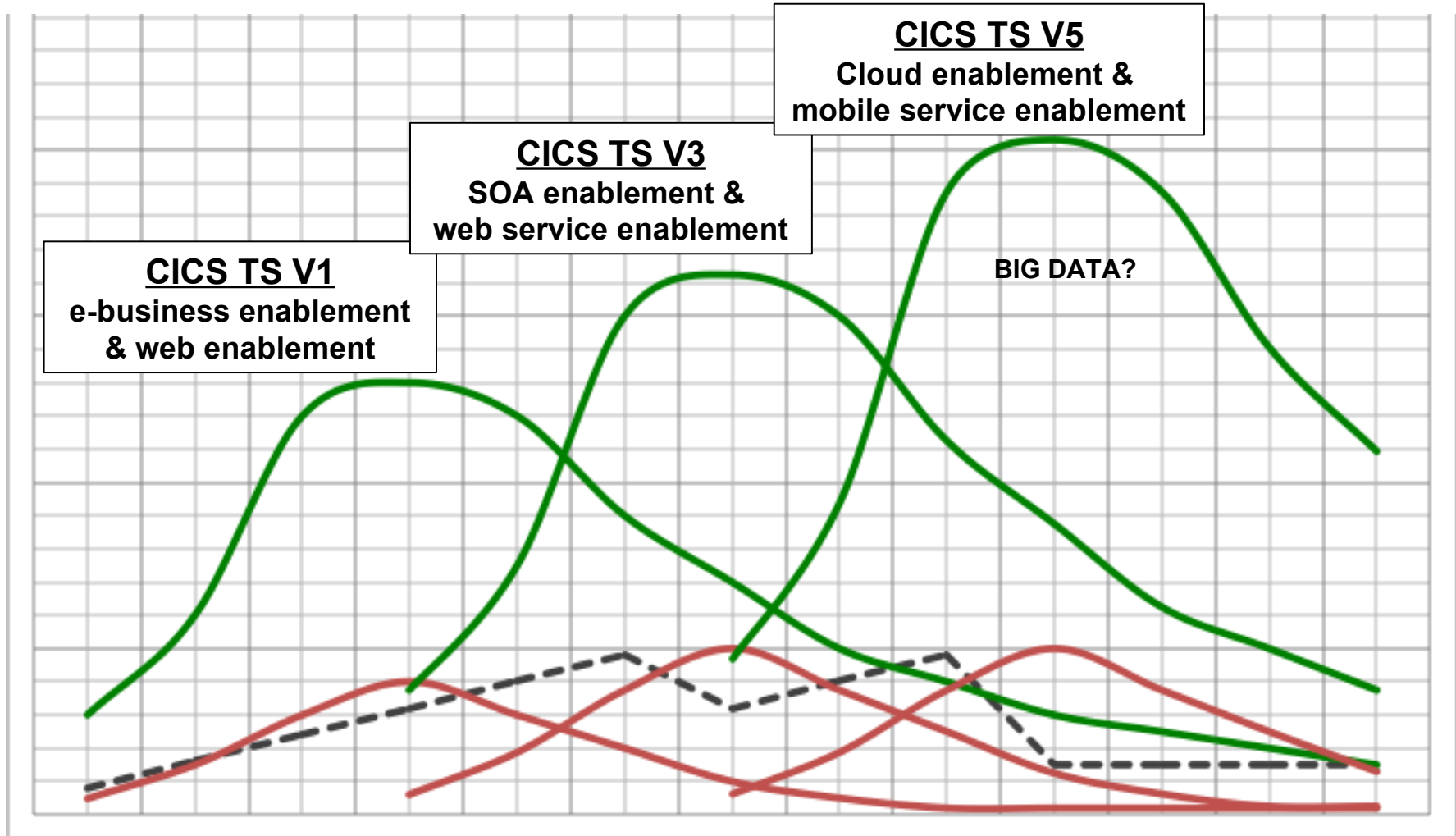
Value, cost and complexity waves



Value, cost and complexity waves



Value, cost and complexity waves



CICS and cloud

The evolution of CICS service enablement *pre-1990s*



The evolution of CICS service enablement

pre-1990s

Value

- High Volume access to shared data
- Rapid creation, deployment and expansion of core services
- Highest Qualities of Service

Cost

- Low incremental cost due to reuse of services and sharing of assets
- Density of mixed workloads delivers efficient use of computing resources

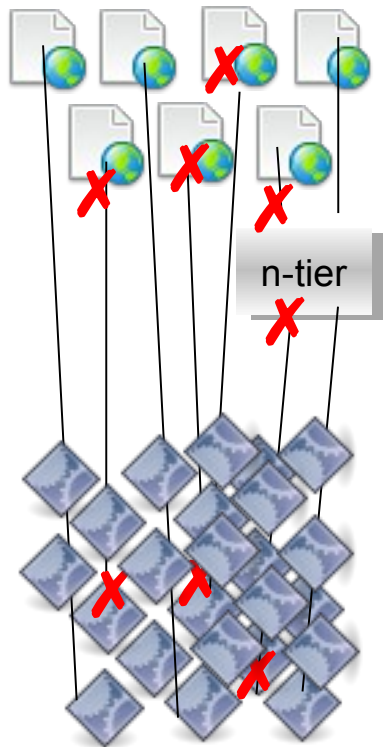
Complexity

- Limited; primarily inside corporate boundaries; dedicated machines
- Increasing in proportion to increase in services



The evolution of CICS service enablement

1990s – 2000s



Value

- Rapidly extending existing core assets through new channels
- Web based applications cut business costs and deliver customer value
- Security is core competency

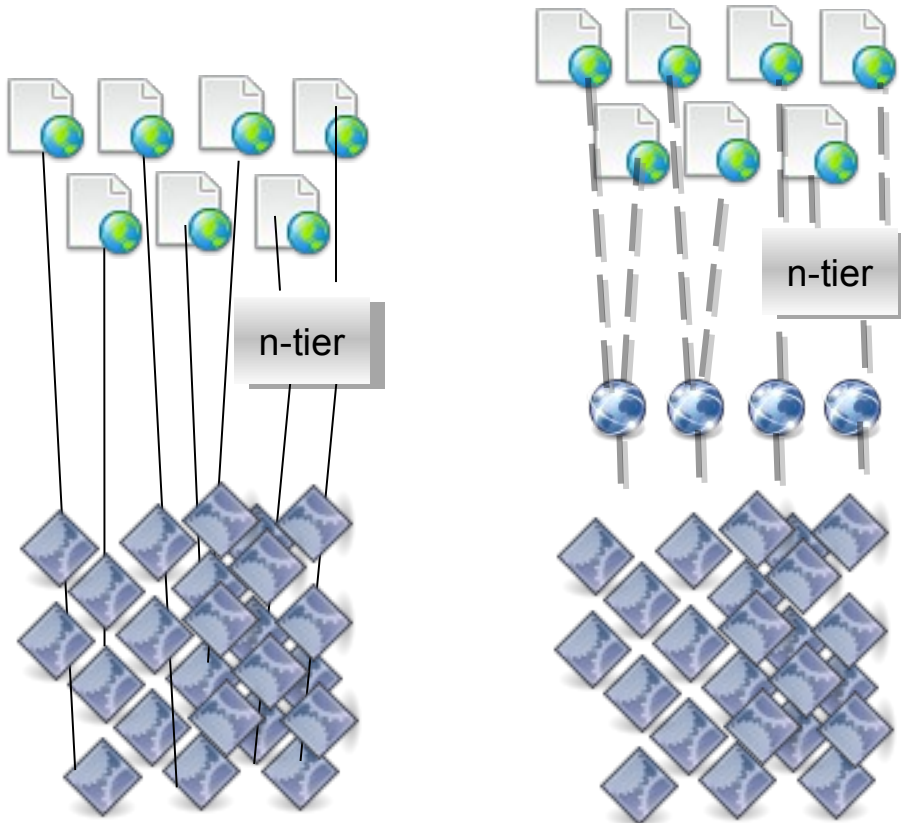
Cost

- Low incremental cost due to reuse of services and sharing of assets
- Density of mixed workloads delivers efficient use of computing resources

Complexity

- Significant increase in complexity as applications extend past company boundaries
- Point to point connectivity

2000's through 2010's



Value

- Rapidly extending existing core assets through new channels
- Web based applications cut business costs and deliver customer value
- Security is core competency

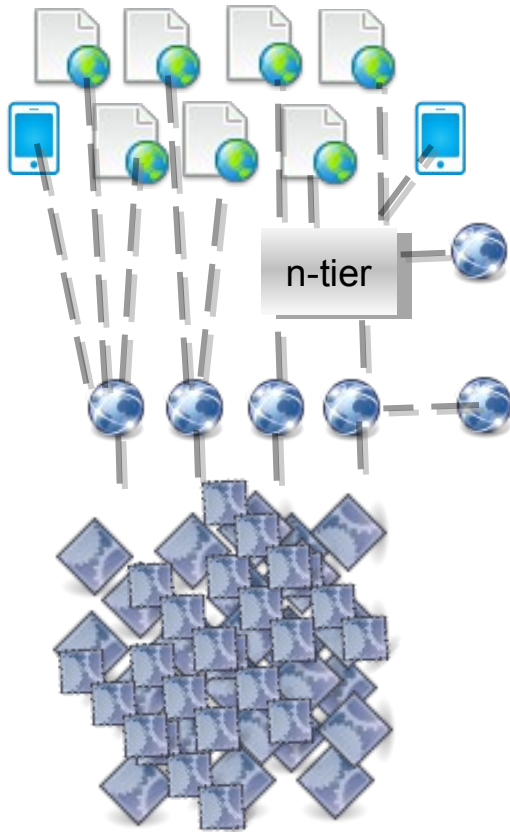
Cost

- Low incremental cost due to reuse of services and sharing of assets
- Density of mixed workloads delivers efficient use of computing resources

Complexity

- Reduction in complexity as standards based SOA capabilities abstract away from point to point connectivity

2000's through 2010's



Value

- Standard SOA infrastructure makes it possible to even more rapidly extend and reuse existing assets.
- Application to Application connectivity now standardized
- Easily embrace new technologies, such as mobile, as they emerge

Cost

- Low incremental cost due to reuse of services and sharing of assets
- Density of mixed workloads delivers efficient use of computing resources

Complexity

- Reduction in complexity as standards based SOA capabilities abstract away from point to point connectivity

2010's and beyond



Value

- Cloud enable core CICS systems to create real, declarative, self describing, agile services
- Roll out new and updated CICS application services, faster, more frequently, with greater confidence

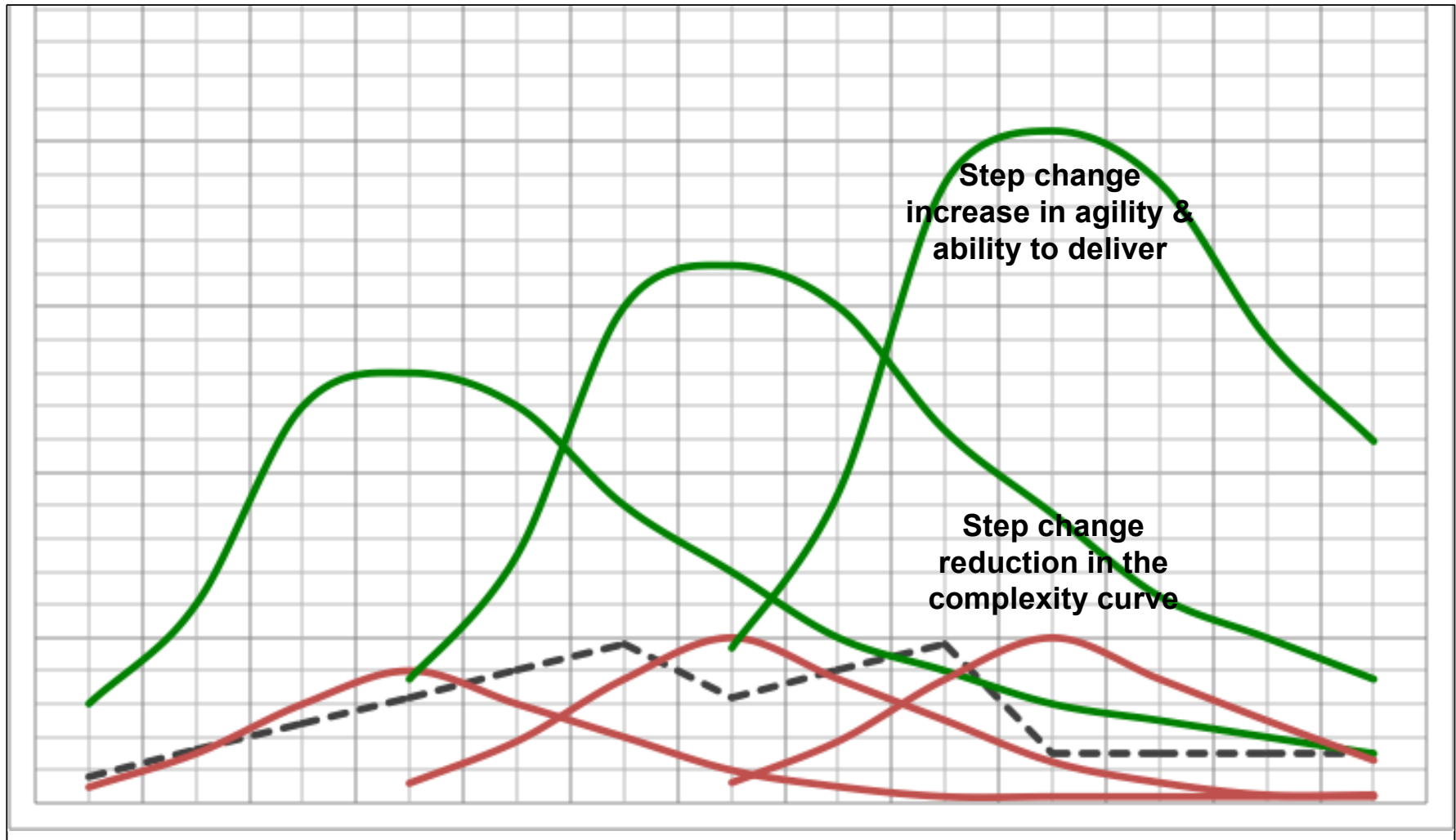
Cost

- One-time effort to understand and package and deploy existing CICS artifacts as Applications.
- Incremental adoption pattern; 'evolution, not revolution'.

Complexity

- Step change reduction in risk and complexity of the application lifecycle, especially provisioning and management.

Value, cost and complexity waves



Applications



First class applications - Create agile services from existing assets

Feature

New declarative application resource

Benefit

Combine and manage disparate application resources as a single entity

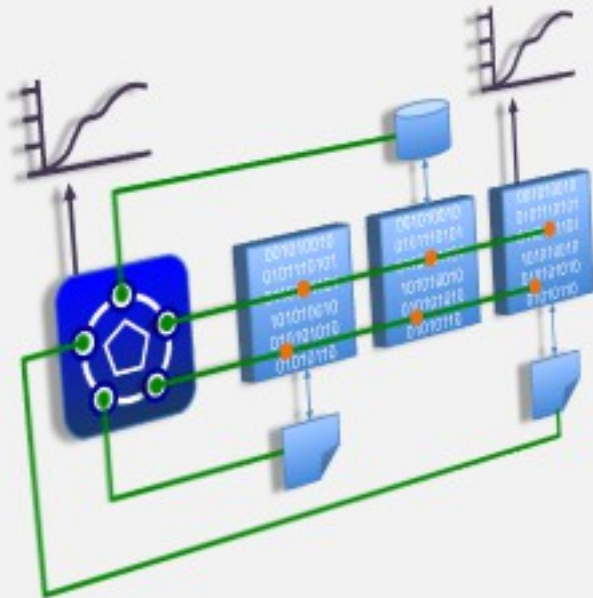
Rapidly move versioned applications through development, test and production

Automate dependency management throughout the application lifecycle

Ensure rigorous yet flexible provisioning with application bindings

Measure entire application resource usage for tracking and internal billings

Dynamically manage applications by applying policies during runtime



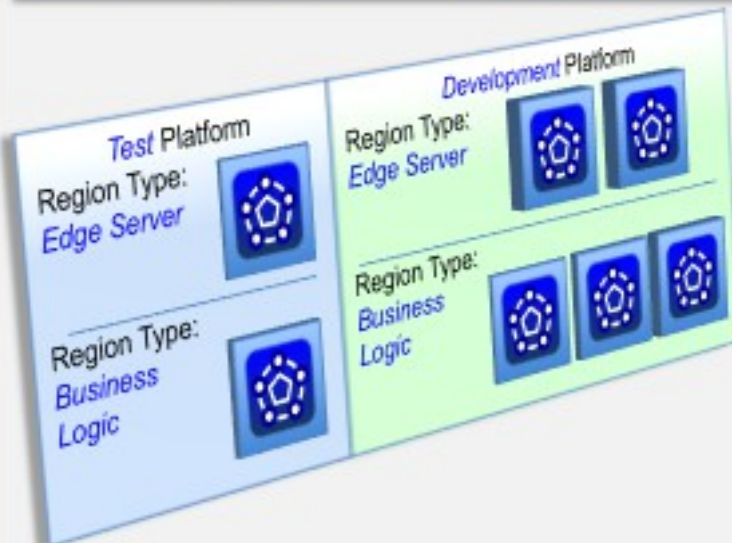
Platforms



First class platforms - Create agile service delivery platforms

Feature

New declarative platform resource



Benefit

Group new and existing regions as platforms for rapid application deployments

Increase flexibility, by decoupling applications from the underlying CICS region topology

Increase reliability through automatic resource deployment and validation

De-provision resources when requested, without requiring any interaction from a system administrator

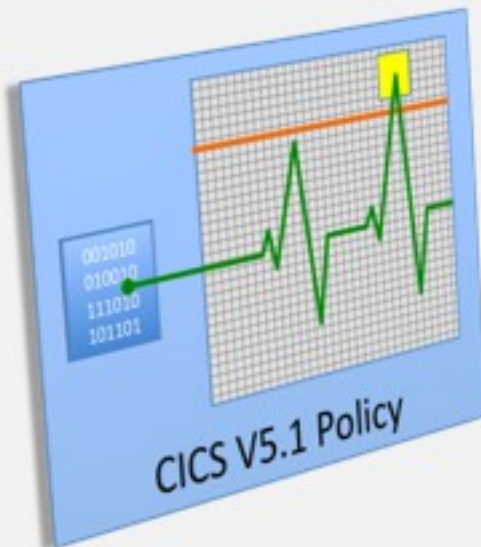
Deploy applications to started regions within a platform, without requiring any interaction from a system administrator

Dynamically manage platforms by applying policies during runtime

Policies



Managed Operations - Reduce cost and risk through automation



Feature

New declarative policy

Set policy thresholds on

- CPU usage
- Storage used and GETMAIN
- SQL or file access
- EXEC LINK

Issue message, abend a task, or emit an event on policy breaches

Benefit

Define and manage SLAs

Critical resource protection

Automatic response to undesired behavior

CICS Cloud Enablement:



Moving towards a cloud oriented service delivery platform

3 simple steps to cloud enablement...

1. Define your platform encapsulating your existing regions
2. Define your applications, entry points, and dependencies from existing assets
3. Deploy your applications onto your platform

With cloud enablement you can...

- Bring the flexibility of cloud deployment to your existing CICS assets
- Easily measure resource usage of your CICS business applications
- Dynamically control your CICS applications and infrastructure at runtime



Application

Create agile services from existing assets



Platform

Create agile service delivery platforms



Policy

Control critical resource thresholds with policies

CICS and mobile

From the IBM Systems Special Report



Special Report: Mobile Mainframe

IBMSystems
magazine

Meeting Demand for Mobile
Survey addresses employee, customer and business partner challenges

BY SHIRLEY S. SAVAGE

Mobile Survey Breaks New Ground

Mobile computing affects every part of an organization's business from customers to partners to employees. All of these stakeholders are embracing the immediacy the technology provides.

Customers now expect services offered by organizations to be available 24-7 with mobile access becoming a particularly important part of that expectation. Recognizing this need, organizations are seeking to provide customer access to services and to alert customers to new offerings. Mobile computing gives employees the capability to connect to their organizations' servers from anywhere. As more companies formulate

This supplement, which details the results of the 2013 International Survey on Developing, Managing and Modernizing Applications for Mobile Delivery, represents new ground for *IBM Systems Magazine, Mainframe edition* as it marks the first time we have partnered with SHARE and GUIDE SHARE Europe to conduct a survey.

The resulting survey, conducted by Unisphere Research in December 2012, polled members of both user groups as well as the magazine's readers to determine their successes and challenges with regard to adopting mobile technology in their enterprises. A total of 537 mainframers responded to the 40-question survey.

To learn about the results, read the accompanying article, which includes analysis from Joe Clabby, president of Clabby Analytics, as well as information from two customers who are adopting mobile in their organizations.

Evelyn Hoover
Evelyn Hoover, Executive Editor,
IBM Systems Magazine

SHARE **SE**
Technology • Connections • Results

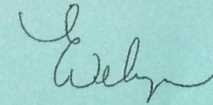
This special report sponsored by **Attachmate**

Mobile Survey Breaks New Ground

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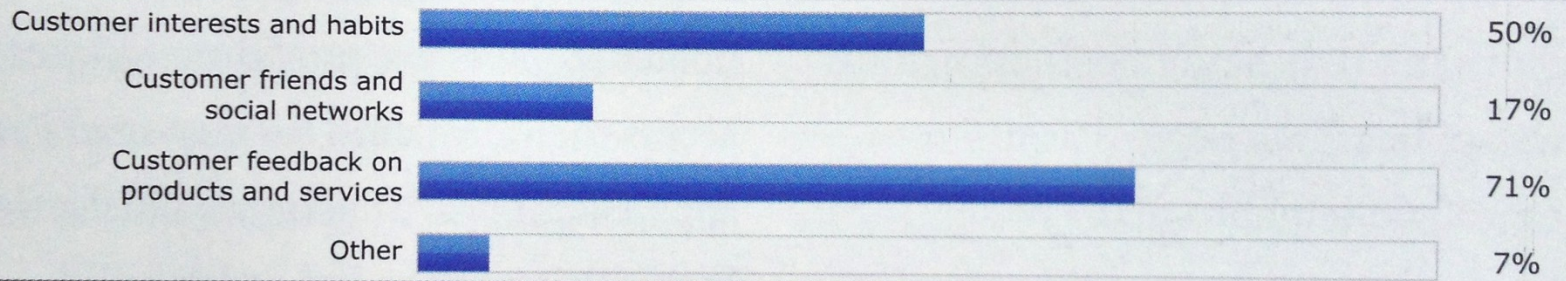


Evelyn Hoover, Executive Editor,
IBM Systems Magazine

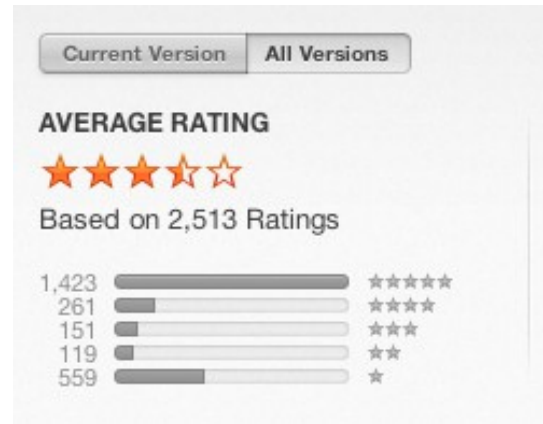


Figure 4

What types of information are you most interested in obtaining from mobile application interactions with your users?



Reviews for major UK bank 'A' mobile app



Very useful ★★★★★

by Jon Robson – 17-Jan-2013

Just what you need access to, your balance and account details, quick and easy transfer of cash etc .

Awesomeeee ★★★★★

by Scrat87 – 22-Nov-2012

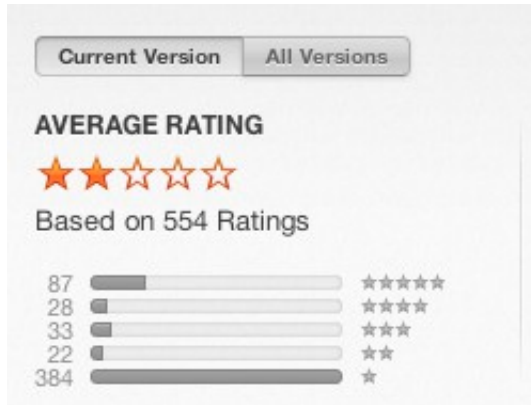
Great app, every update made it much better. You can do almost every thing that the online banking offers. It even has a pins entry that is so useful. Great job. There isn't a single app for any other bank that is half as good.

I'd be lost without this app ★★★★★

by MylesKane – 17-Nov-2012

One of the best and most used apps I have. I'd join barclays just for this app. Really easy and useful. Well done.

Reviews for major UK bank 'B' mobile app



Get it sorted ★★★★★

by Vicawoo – 09-Nov-2012

Used to work which was great , now hasn't been working for more than a month , you really would of thought that they would have got it sorted!!! This is an app which everyone uses and lloyds have just let us down !!!

Not working still ★★★★★

by Ballyanna – 15-Nov-2012

Been trying for days now and since new update it just keeps crashing ! Very irritating. You would think this day and age and a bank of this calibre would have their tech sorted! [redacted] app by far better . Such a shame!

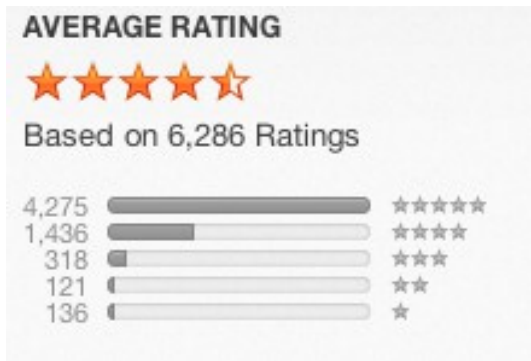
Worst way to manage account ★★★★★

by Mohammed shanidh – 15-Nov-2012

This app is just like a browser application. All it does is displays the same web page in an application. Compare to [redacted] and [redacted] is still in the times of Second World War.

And there's more...

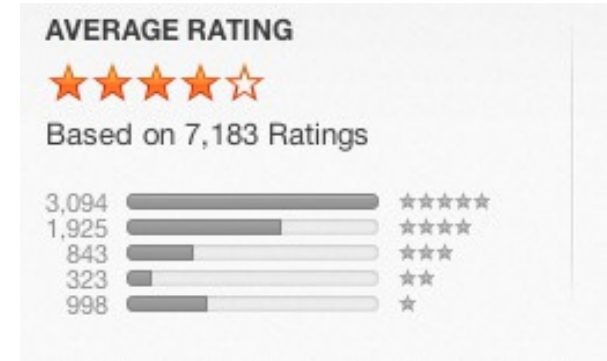
UK Airline 'A'



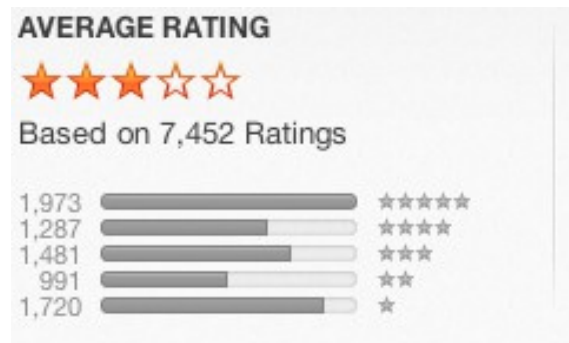
UK Retail 'A'



UK Telecoms 'A'



UK Airline 'B'



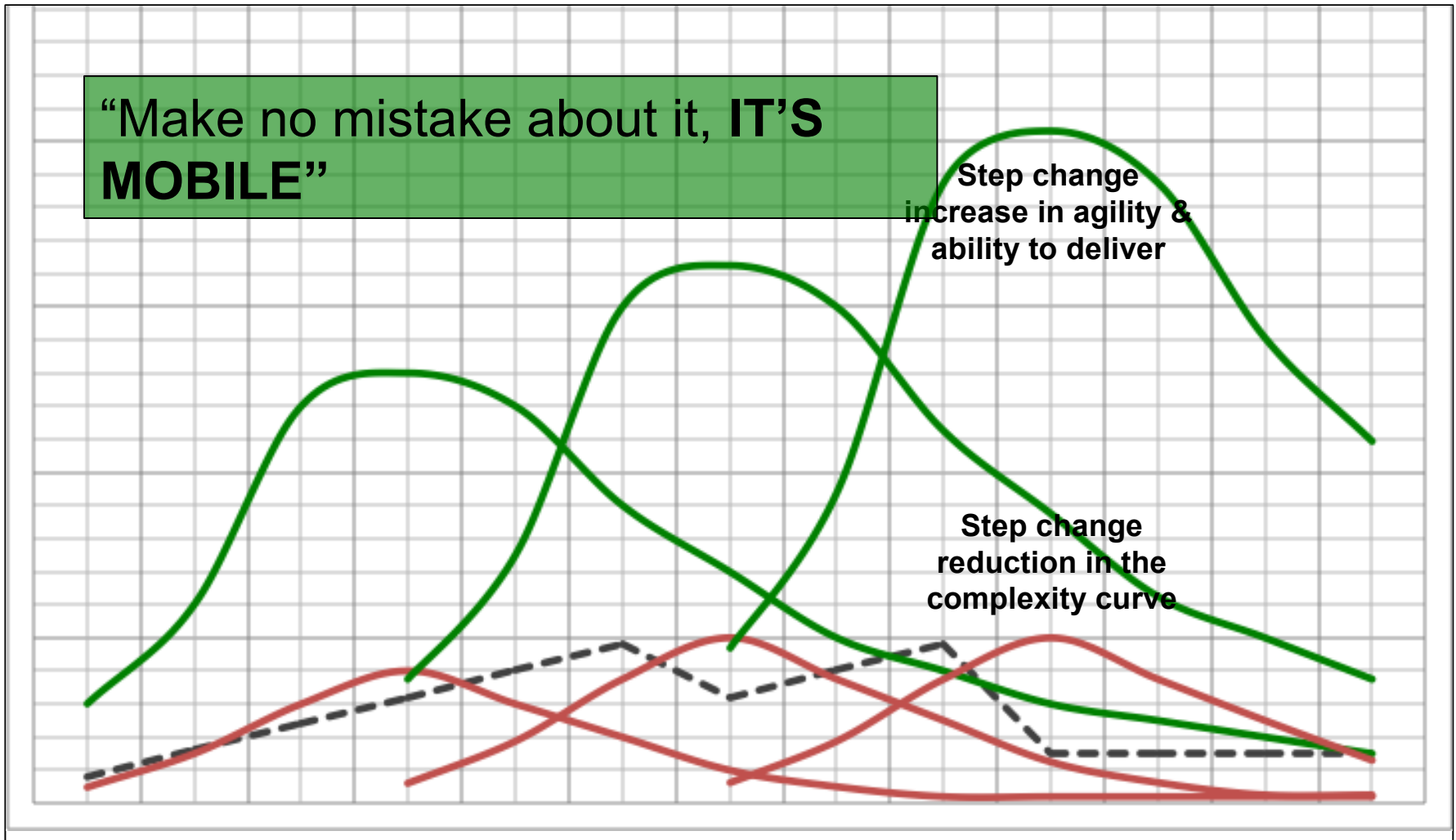
UK Retail 'B'



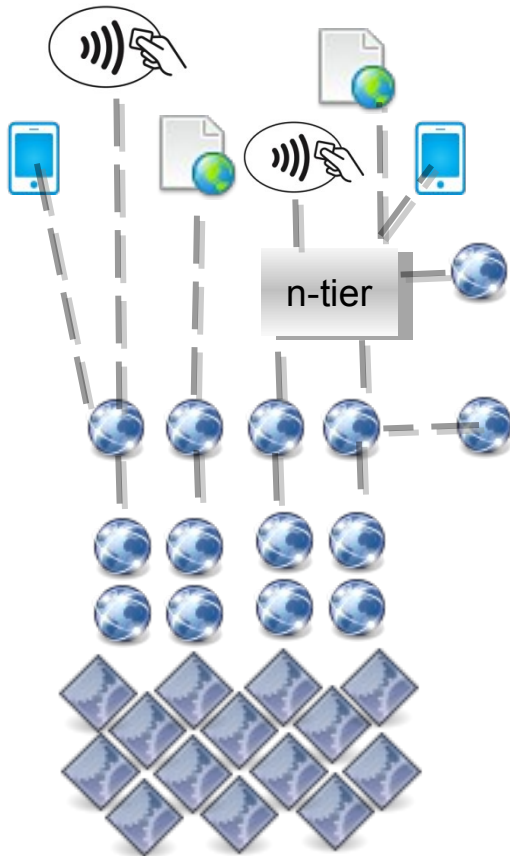
UK Telecoms 'B'



Value, cost and complexity waves



2010's and beyond



Value

- Largest current opportunity to drive top line growth
- Largest current opportunity for new customer acquisition and existing customer loyalty.
- Largest current opportunity for cross-sell and up-sell of product line.

Cost

- Low incremental cost for service enabled companies
- Incremental adoption pattern; 'evolution, not revolution'.

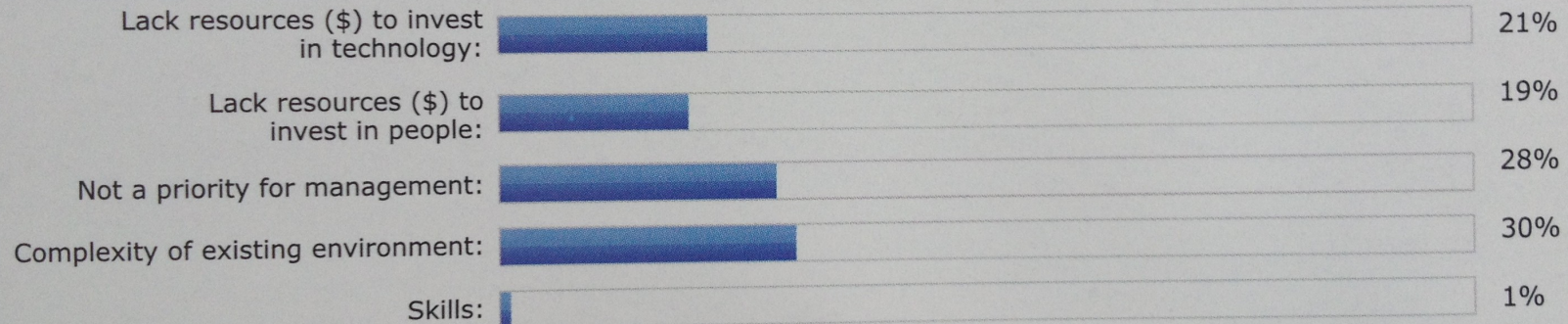
Complexity

- Depends on your starting place – agility is key.
- Reduces as use of vendor provided services increases

Cloud or mobile? Or Cloud and Mobile?

Figure 8

What is the biggest inhibitor to more rapidly providing the necessary interfaces to support mobile applications?



Does being agile matter?

Current Version All Versions

AVERAGE RATING
★★★★☆
Based on 1,539 Ratings

315	██████████	★★★★★
117	██████████	★★★★★
117	██████████	★★★★
113	██████████	★★★
877	██████████	★

Information

Developer Monitise International
Category Finance
Updated 11 December 2012

Update Ruined it ★★★★★

by Rach@ladybirds – 11-Dec-2012

This worked perfectly until I updated the app. Now I can't get passed the pass code screen. One of my most used apps now useless. Sort it out [REDACTED]

Doesn't work ★★★★★

by My Bell – 11-Dec-2012

Used to work fine, was one of the best apps. Since the update has been utterly useless. Very disappointed!!!! Sort it out!

Failed log in. ★★★★★

by patiuk999 – 11-Dec-2012

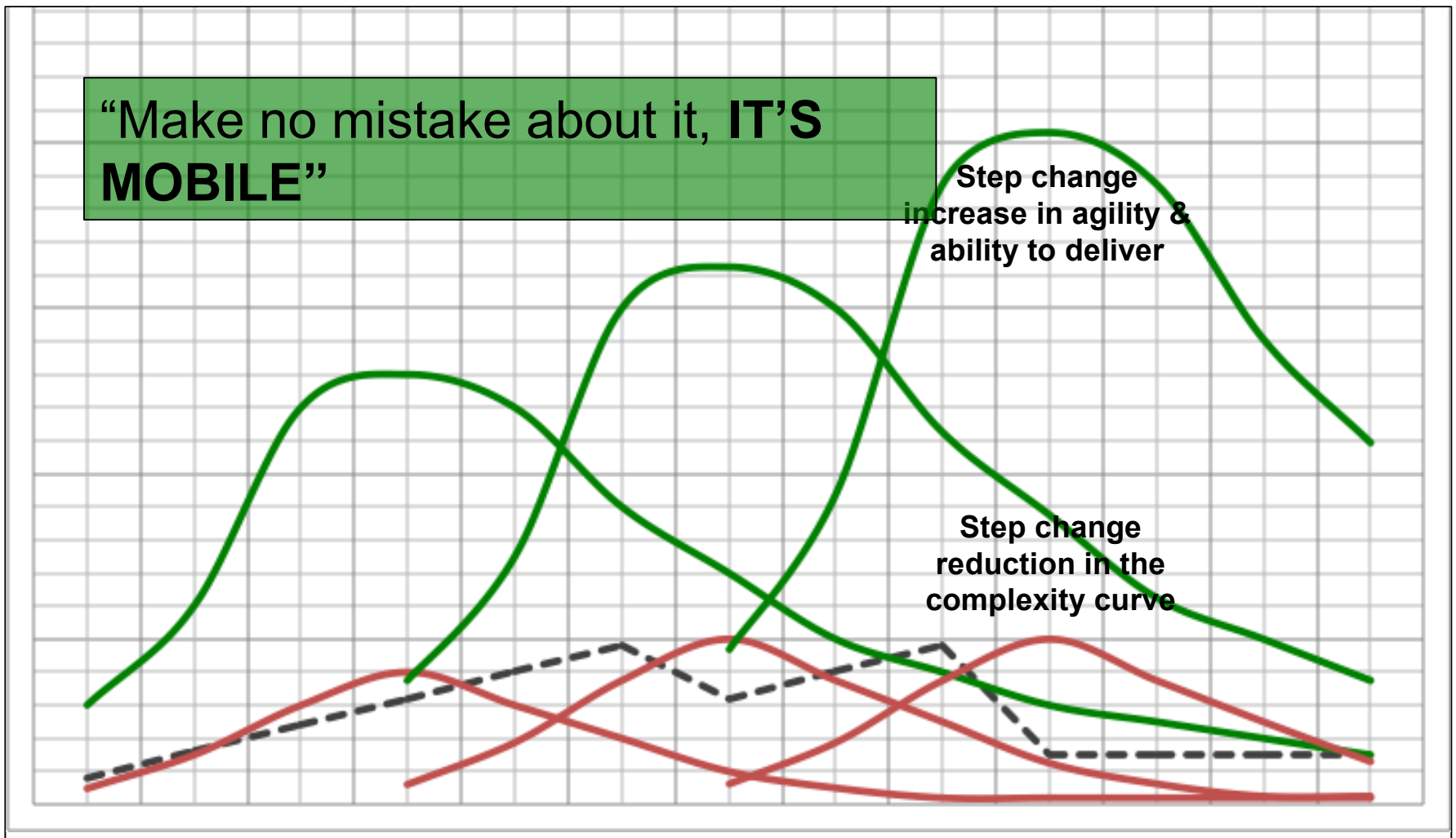
Could not log in after update. Looked like scam. I wonder if this app is still valid. It's pity, [REDACTED] could not do enough dry run on this app, before they release it to public. i am losing trust on [REDACTED]. I am going to delete the whole thing from my phone.

Update wrecks a good app ★★★★★

by Pablo313 – 11-Dec-2012

Can't use app since update very poor by [REDACTED] Update tells you to delete and reinstall. Done this and the had to re register which won't complete so I can't use app. Please sort. Every update you do makes app unusable. Try testing before releasing.

Value, cost and complexity waves



Liberty Profile Mobile Scenario



Modern interfaces - Build rich web experiences for critical applications

Feature

Embedded web container for Servlets & JSPs

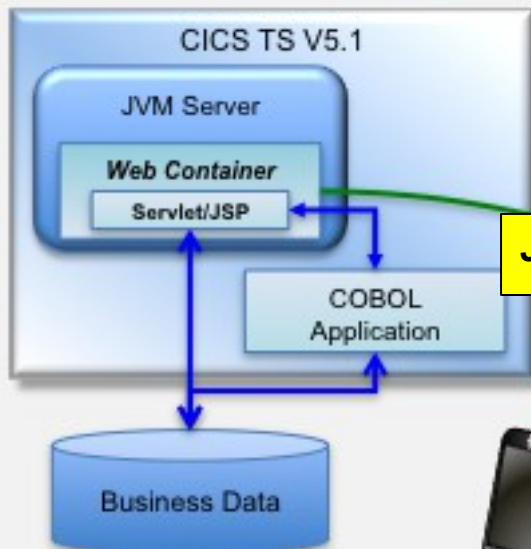
Benefit

Deployment of lightweight Java servlets and Java Server Pages (JSP)

Improved performance through local access to CICS applications and data

Rapid roll-out of interface updates through OSGi-packaged deployments

Full integration with first-class applications and platforms



JSON

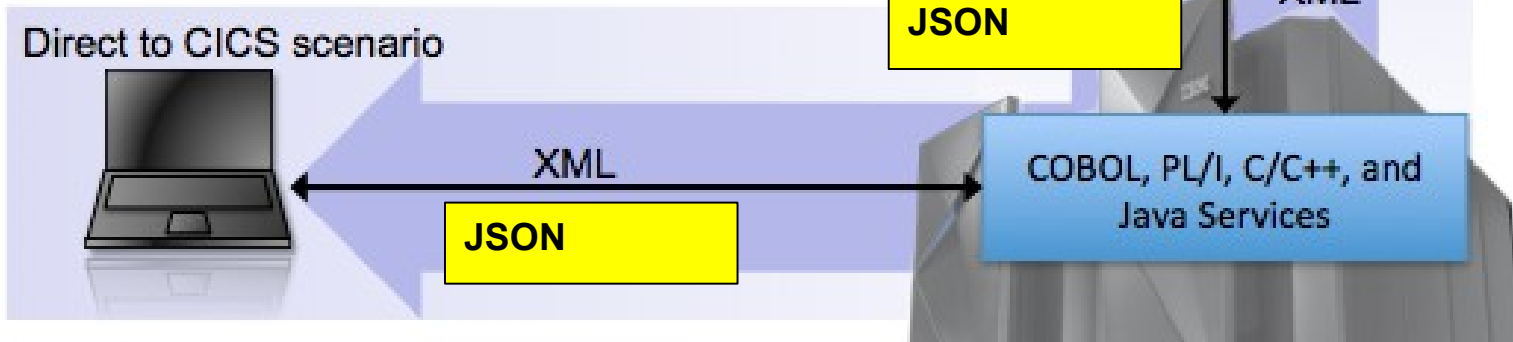


JSON Support coming soon

Worklight Mobile Scenario

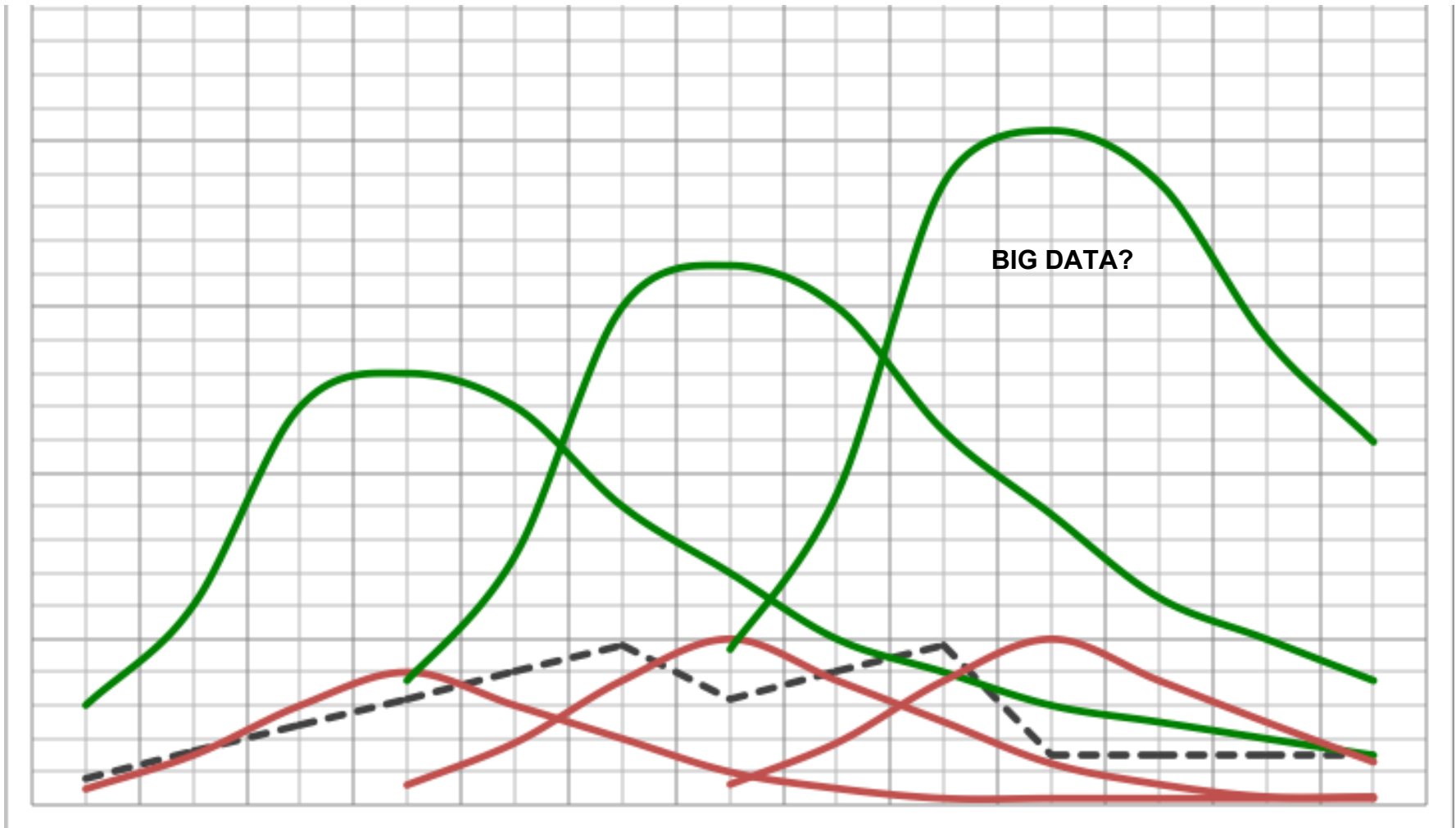
JSON Support coming soon

- Worklight already provides easy mobile access to your enterprise CICS services.
- IBM intends to further simplify Worklight-CICS connectivity with JSON support in CICS
- Extend the reach of your mobile apps to CICS enterprise assets
- Implementation and deployment processes consistent with CICS web services



CICS and big data

Value, cost and complexity waves



CICS & Big Data Strategy Today

Multithreading

DB2
File Control
DBCTRL



Capacity Limits

MaxTask

Monitoring and Stats

SMF / RMF
Applications & Platforms

DB2 IMS VSAM

System of Record

System 64-bit

Channels & Containers
Temporary Storage
Trace Data
Internals/Control Blocks

Application 64-bit

Java
Assembler (non-LE)

Data being processed per request increasing (20Kb, to 200KB to 2Mb to 20Mb, etc)

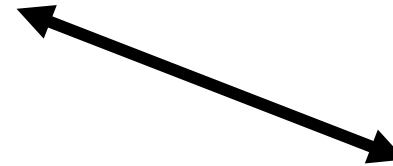
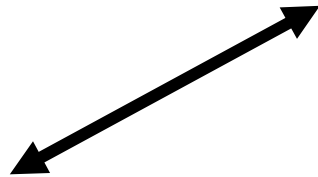
CICS & Big Data Strategy Tomorrow?

Fast Flowing Data

Majority unimportant
Sifting through the 'noise'

Data at Rest

All important
How best to utilize?



Social Networks
Stock Tickers
Retail Transactions

Data Warehouse
Lifetime Customer
Lifetime Inventory

**Fast Flowing
Data**

**System of
Record**

Data at Rest

Summary

- Overall CICS market dynamics
 - Value, cost and complexity all have to be managed together
- CICS and Cloud
 - Cloud is a logical next step in the evolution of service enablement
 - IBM continues to make these benefits available to CICS
 - Reducing complexity and increasing agility is not optional
- CICS and Mobile
 - Mobile isn't 'the next big thing' it is 'THE big thing TODAY'
 - IBM continues to make these benefits available to CICS
 - Being agile is a pre-req to real mobile success
- CICS and Big Data
 - Today, CICS and Big Data interact at the periphery
 - How will that evolve?

Value, cost and complexity waves

