Carving out Cost with the Mainframe

Presenter

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A Disclaimer of Sorts 😊

- I am an Australian
  - If the word ends in 'er' I may pronounce it with an 'a'
    - e.g. "Miller" -> "Milla"
  - If the word ends in 'a' I may pronounce it with an 'er' instead of the 'a'.
    - e.g. "banana" -> "bananer"

- This presentation is at the enterprise architect level.
  - It is **not** a technical "deep dive"; it is a "gentle snorkel" and a peek at what other "divers" have encountered.

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Agenda

- The CIO in 2008-2009

- Introducing Linux on the Mainframe

- Case Studies

  - Bank of New Zealand

  - Allianz

  - Suncorp

- Conclusions

- Acknowledgments

- Questions?

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The CIO in 2009

- Enable the business

- Increase ability to respond

- Decrease time to market

- Obtain (and hold) competitive advantage

CIO Priorities

1. Reduce costs
2. Drive business innovation
3. Enable competitive
4. Improve customer satisfaction
5. Grow revenue

Open Source Economies & Innovation Shift the Capability Curve

Budget
Output
Capability (Open Source)
Expectations
Capability (Proprietary)
Expenditure
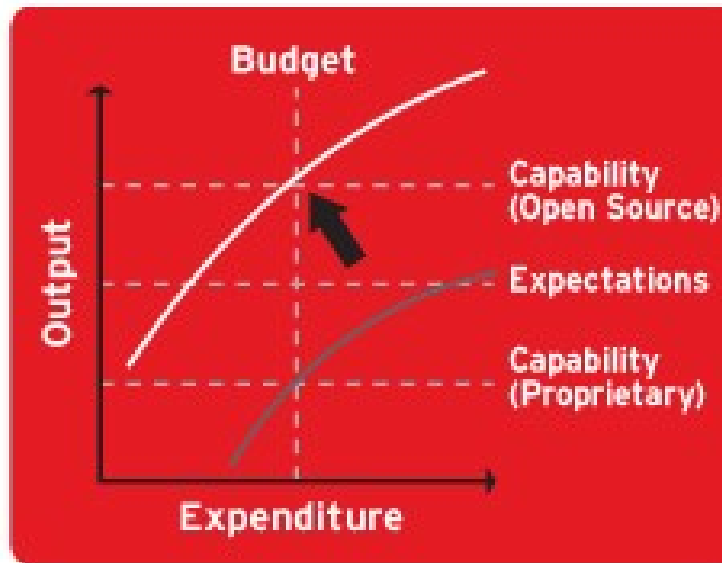
CIO Barriers

1. Backlog of projects
2. Inadequate budget
3. Shortage of planning time
4. Unrealistic expectations
5. Unknown expectations

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Key Performance Indicators

- Exceed expectations
    - Ahead of time
    - Under budget
- Do more with Less
    - Much more
- Carve out Cost
- Be green
- Be land-locked

Fleshing out the Details

- ## Agile methodology

  - ### Rapid project response & delivery

- ## Carve out Cost

  - ### Effective Vendor Governance

  - ### Every deal is a Tender

- ## What about the children?

  - ### Kyoto, Copenhagen & Beyond

- ## Land-locked

  - ### Space, power, cooling.. the usual..

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Soft barriers: The Green Factor

- Are you a "good corporate citizen"?

  - Kyoto / Copenhagen Agreements
  - Emissions Trading Schemes
  - Leadership in Energy and Environmental Design standard will become a differentiator
  - Green taxes
  - Governments considering allowing businesses to trade in Carbon Credits to reduce business taxation
  - Security of energy supply
  - The Green Grid
  - Business ethics
  - Australian Government's Greenhouse Challenge plus program

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Hard barriers: The Space Factor

- The infrastructure team projected it a while ago...

- Moore's Law doesn't account for bad practice; distributed sprawl, poor software, project ownership

- Future -> Present -> Past

  - 2007: "We're going to run out of space in 2-5 years"

    - We need a new data centre (NACK)

    - We need to virtualize! (ACK)

  - 2008: "We're running out of space"

    - We need to virtualize more! (ACK)

    - We have, and we're still sprawling!!!

  - 2009: "Ok we've run out of space, now what?"

Bed sheets cover up widening data centre crisis

A Sydney data centre has resorted to hanging cotton sheets from the roof to alter in-room airflows, highlighting the cooling crisis faced by many Australian operators.

It is understood that other centres are placing chimneys over hot equipment to exhaust the hot air straight through the roof, or installing false roofs between racks to negate inadequate floor pressure.

"We see a lot of inefficient use of air-conditioning," said Brad Ferguson, managing director of The Frame Group, a Sydney-based technology services company.

"There is no regard to the aerodynamics or airflow within the facility or even how equipment is placed into racks. We're currently working on one [centre] in Victoria like this."

Liquidity (lĭ-kwĭd'ĭ-tē) *noun.*

- Available cash or the capacity to obtain it on demand

- The condition of having enough money on hand to meet financial obligations without having to sell fixed assets, such as machinery or equipment.

Liquidity. The American Heritage(R) New Dictionary of Cultural Literacy, Third Edition. Houghton Mifflin Company, 2005. http://dictionary.reference.com/browse/liquidity.

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A Tough Climate!

- Some might say a "Perfect Storm"?

- Expectations only change when

  - Compelled to do so

  - A persuasive argument

  - Market forces

  - Activity of Line(s) of Business

Customer Case Studies

- Bank of New Zealand

- Allianz

- Suncorp

    What do they have in common?

- Strong financial market operators

- Recently acquired, or have made acquisitions

- Have been noticed by the Market

- Have achieved great success

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Bank of New Zealand

- Financial services in ANZ (subsidiary of NAB)

- Environmental & space issues in the data centre, become Carbon Neutral by 2010

- Distributed Intel / SPARC (130 servers) to IBM z9 & IBM z10 Mainframes (3 IFL each)

- Increasing IFL footprint, more applications!

"We have also managed to substantially reduce our front-end power consumption by nearly 40 percent, which means we were well and truly on our way to becoming carbon neutral by our 2010 goal." - Lyle Johnson, Infrastructure Architect BNZ

Allianz

- Large general insurer in Australia, and globally

- Red Hat Enterprise Linux on IBM System z10 mainframe - reduces Carbon Footprint by up to 20%

- Saves the organization over 1 million dollars per year in hardware & software support costs!

- Carbon Neutral by 2012

"After running WebSphere applications on an Intel platform using Windows for some time, we realised we couldn't go any further with the current set-up. We needed a platform that could give us the flexibility and scalability to enable us to grow and expand for the future"

Peter Rowe, Head of Infrastructure & Operations, Allianz Australia Limited.
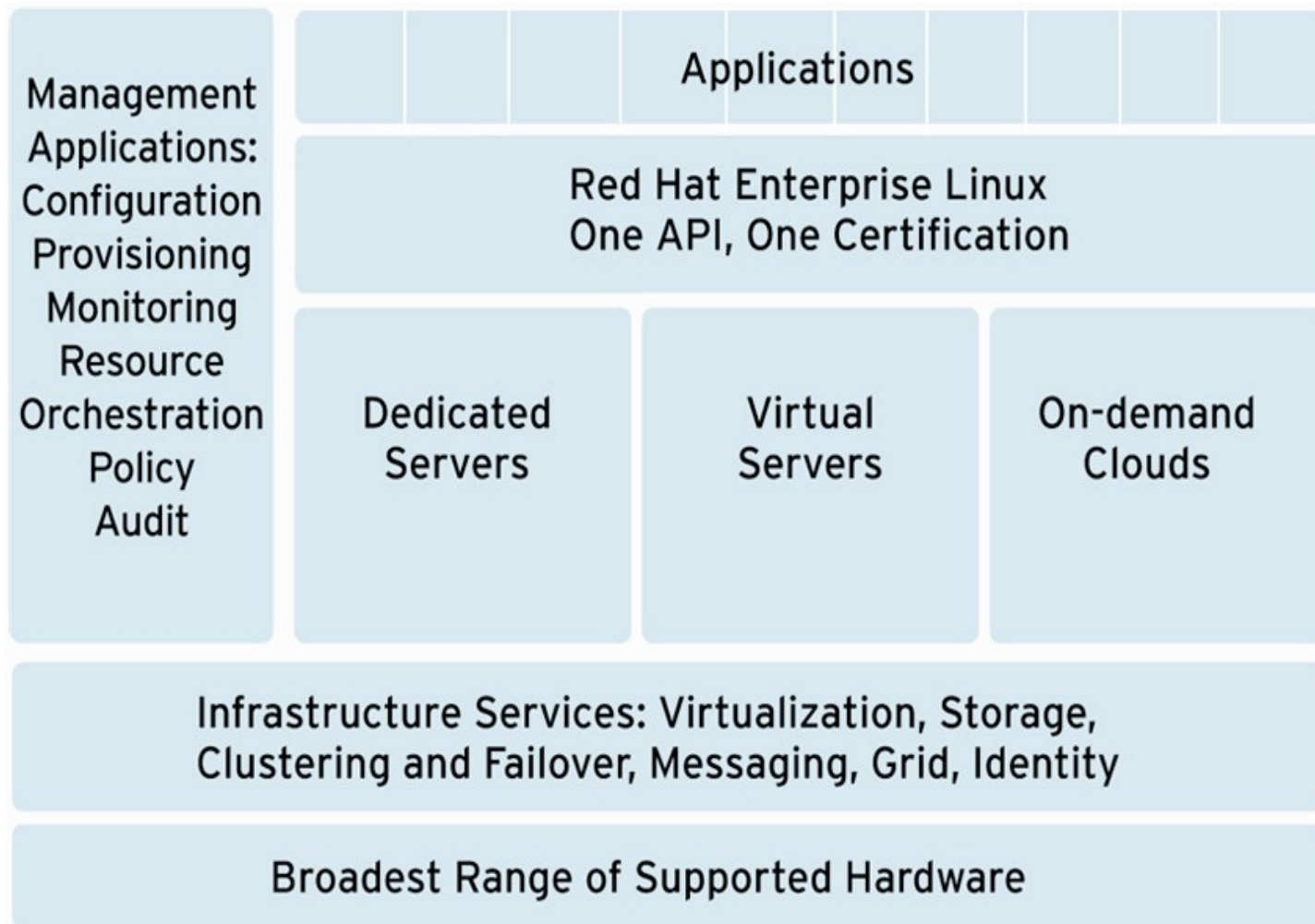
Suncorp

- Large general insurer in Australia

- Significant use of RHEL

- Actively migrating applications to JBoss

- PostgreSQL emerging as strategic database alternative.

- RHEL on Z POC underway.

"Even though we are embarking into a new data centre, Open Source & the Mainframe are immensely strategic to the organization."
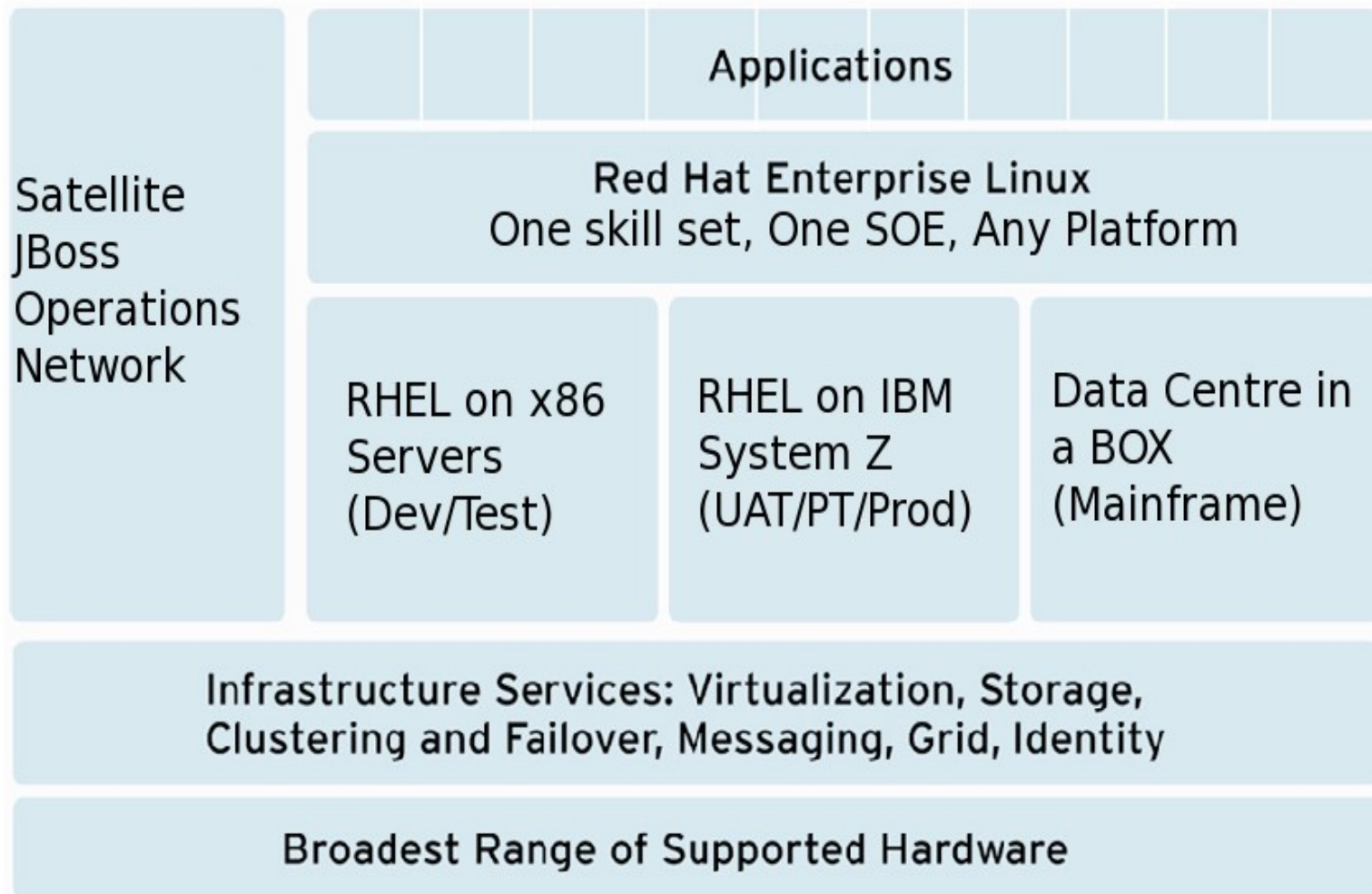*- Jeff Smith, CIO, Suncorp*

The Solution

- Space, Power, Cooling – Consolidation – Mainframe

- Power, Licensing, Flexibility – Red Hat Enterprise Linux

- Rapid Application R&D – JBoss (Java)

- Update, Manage, Provision, Deploy – RHN Satellite

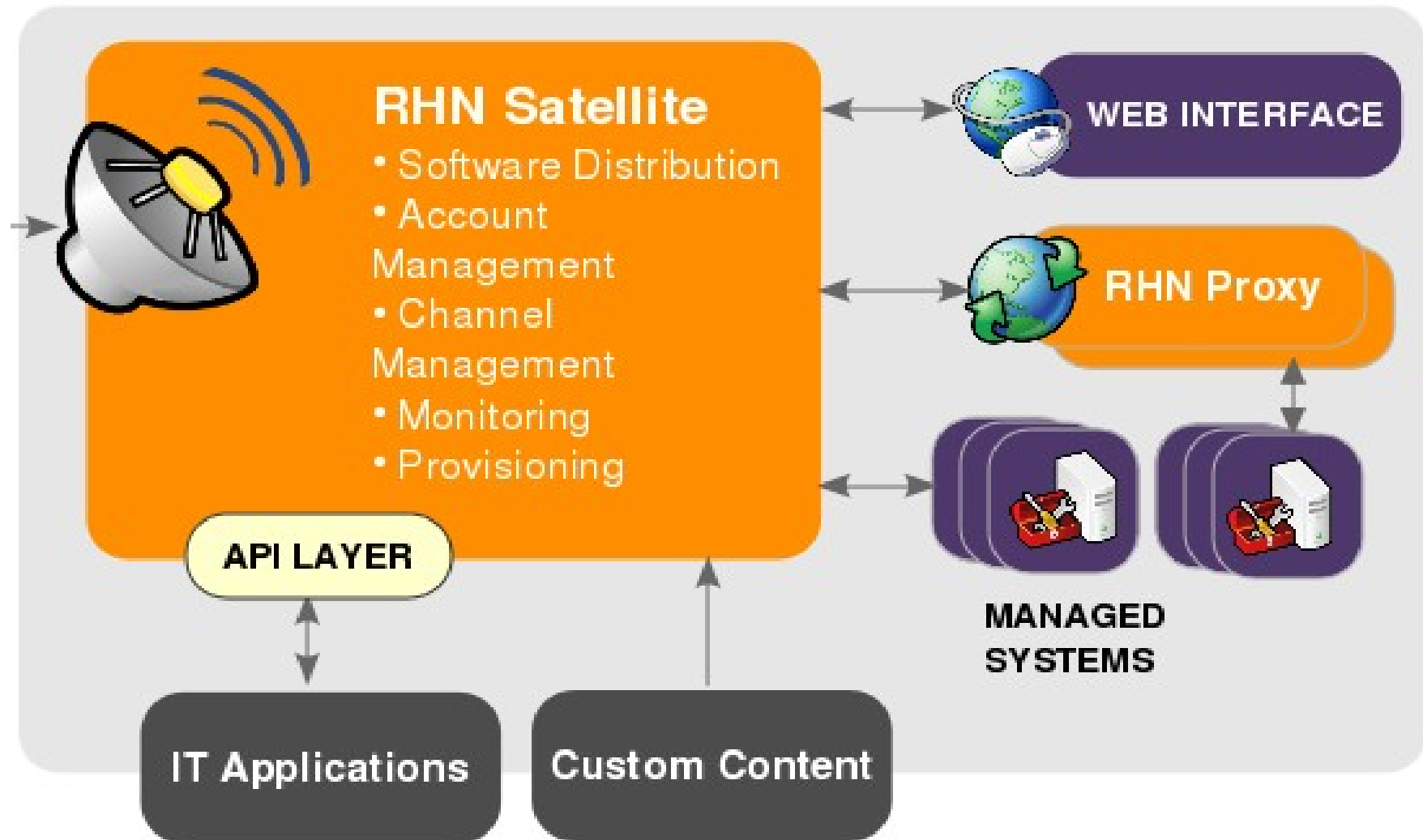- Manage, Provision, Deploy, Monitor – JBoss ON

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Linux Automation in Theory

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Linux Automation in Practice

Satellite
JBoss
Operations
Network

Applications

Red Hat Enterprise Linux
One skill set, One SOE, Any Platform

RHEL on x86
Servers
(Dev/Test)

RHEL on IBM
System Z
(UAT/PT/Prod)

Data Centre in
a BOX
(Mainframe)

Infrastructure Services: Virtualization, Storage,
Clustering and Failover, Messaging, Grid, Identity

Broadest Range of Supported Hardware

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Satellite: One SOE for All Architectures

JBoss Operations Network

JBOSS ON

Discovery and Inventory

Configuration Management

Application Deployment

Availability Management

Performance management

Content Management

JBoss ON

JBoss Management Simplified

JBoss SOA Platform

JBoss Enterprise Application Platform

JBoss Enterprise Web Server

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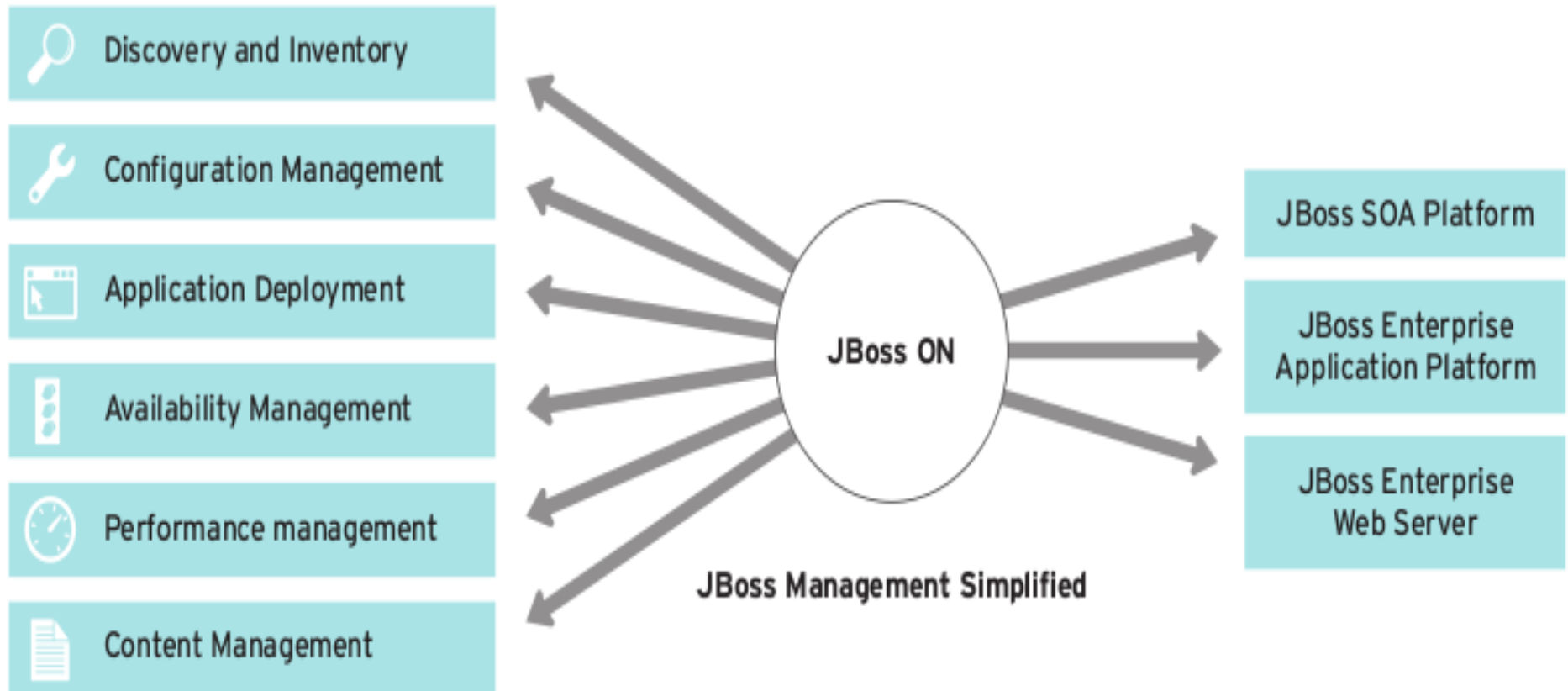
Conclusions

- Red Hat & IBM in partnership enabled Bank of New Zealand, Suncorp & Allianz

- A great value proposition that

  - Enabled "green" - Carbon Neutrality

  - Delivered a Data Centre in a Box

  - Achieved flexibility using JBoss & Red Hat on a platform whose RAS is off the scale

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QUESTIONS?

TELL US WHAT YOU THINK:
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