

# Balancing Risks, Innovation & Results in 'Real World' Projects

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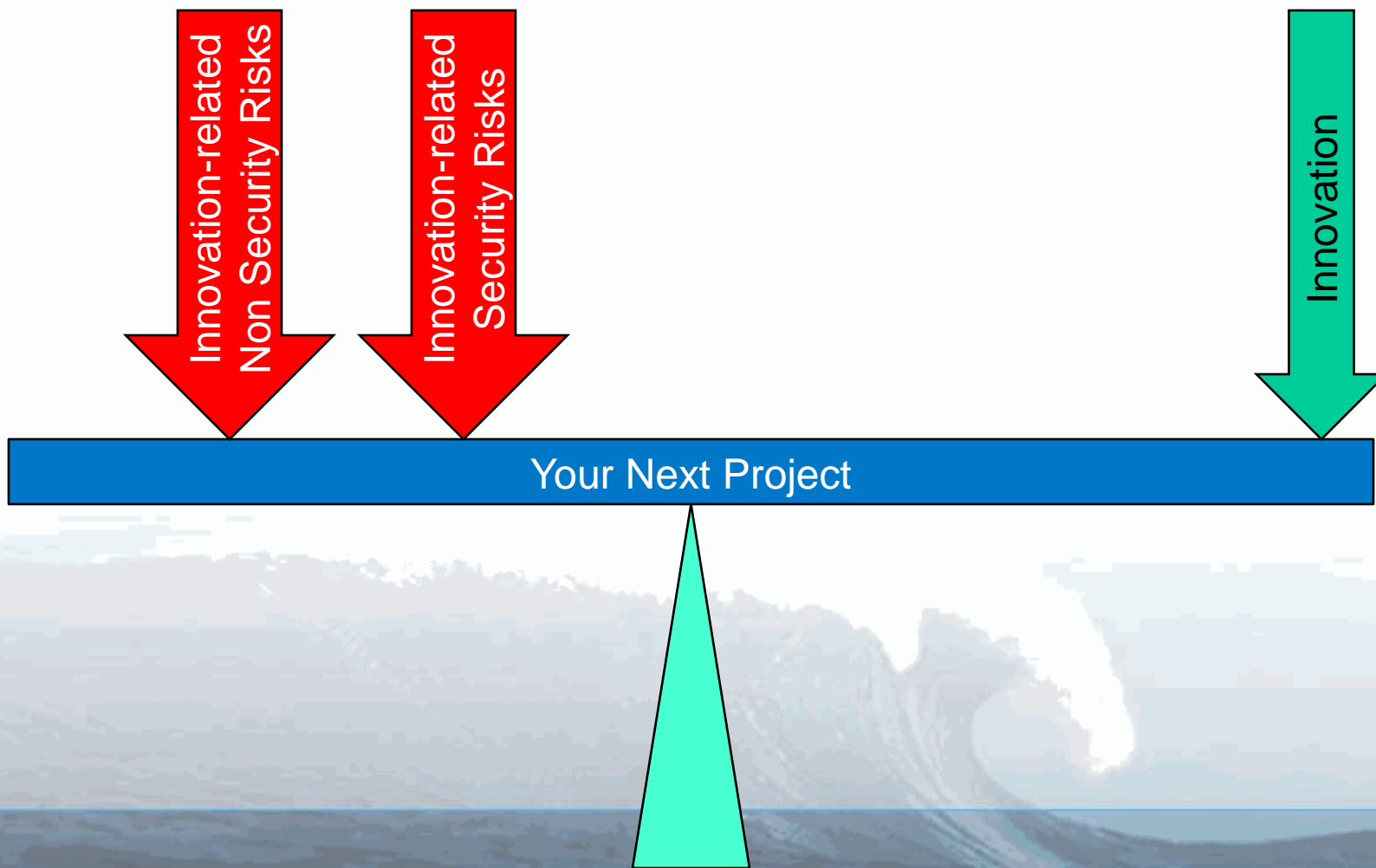
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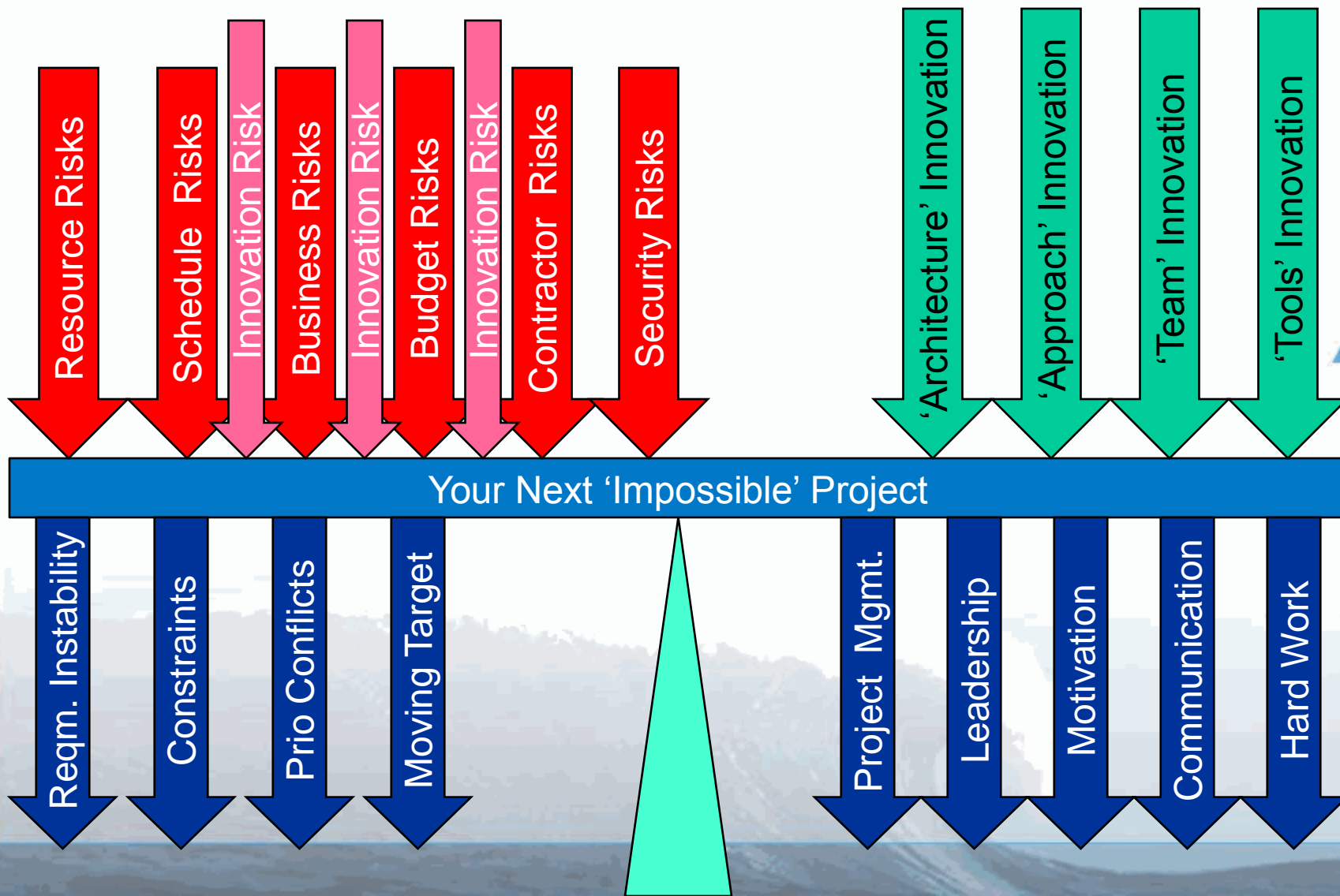
**22<sup>nd</sup> January 2010**

# The 'Conventional' View of Innovation & Risk



# My 'Real World' Perspective...

*after 37 years of delivering 'Impossible' Projects*



## Innovation in a 'Real World' Project

- I inherited a strategic goal that had suddenly become urgent
  - And absolutely had to be delivered in the next year
- The same year when we had to move HQ, migrate applications from external hosting, launch new applications, etc
  - **And the team I inherited was 'burnt out'!**
- I chose to do it using innovative in several dimensions:
  - Architecture & underlying technology
  - Project Management & Governance
  - Teaming / Learning & Tools
- And **expand** the scope of the project – **to a 'game changer'!**
- Crazy or not, we demonstrably delivered the business goal within 12 months - while moving headquarters at three weeks notice just before going live with a new application
- **And the burnt out team is transforming from 'followers' to 'leaders'**
  - And now have many new responsibilities ..... and new strategic goals

- **Founded in 2004 after 'Erika' & 'Prestige' disasters**
  - Tasked with technical support to European Commission
  - Inspection of Classification Societies
  - Follow-up of 'Port State Control' (PSC) Legislation
  - Anti-Pollution Network & Protection of Marine Environment
- **Now heavily focused on Development & Operation of EU's Maritime Applications including Vessel Tracking & Monitoring:**
  - SafeSeaNet (SSN), CleanSeaNet (CSN), Long Range Identification & Tracking (LRIT), THETIS (new PSC Risk Profiling & Inspection Application)
- Moved from Brussels to Lisbon in 2006 – temporarily at Expo
- Moved from Expo to new HQ at RdN, near Cais do Sodré, in May 2009



# Agenda

Part 1: Innovation doesn't mean 'Forget the Basics' – you'll need them!

Part 2: Solution Architecture & Technology Innovation

Part 3: Project Management 'Approach' Innovation

Part 4: Teaming & Learning Innovation

Part 5: Tools Innovation

Part 6: What could you learn from all of this?

## Innovation doesn't mean 'Forget the Basics'

- What does the business want?
  - What do they say they want?
  - What do they really mean?
  - **What does 'success' look like?**
- Understand budget, resources, constraints, issues, other –probably conflicting - priorities?
- What are the risks and mitigations?

## Back in June 2008 the initial Business Requirement was...

**Host this by Mid 2009**

Existing:

SafeSeaNet

New:

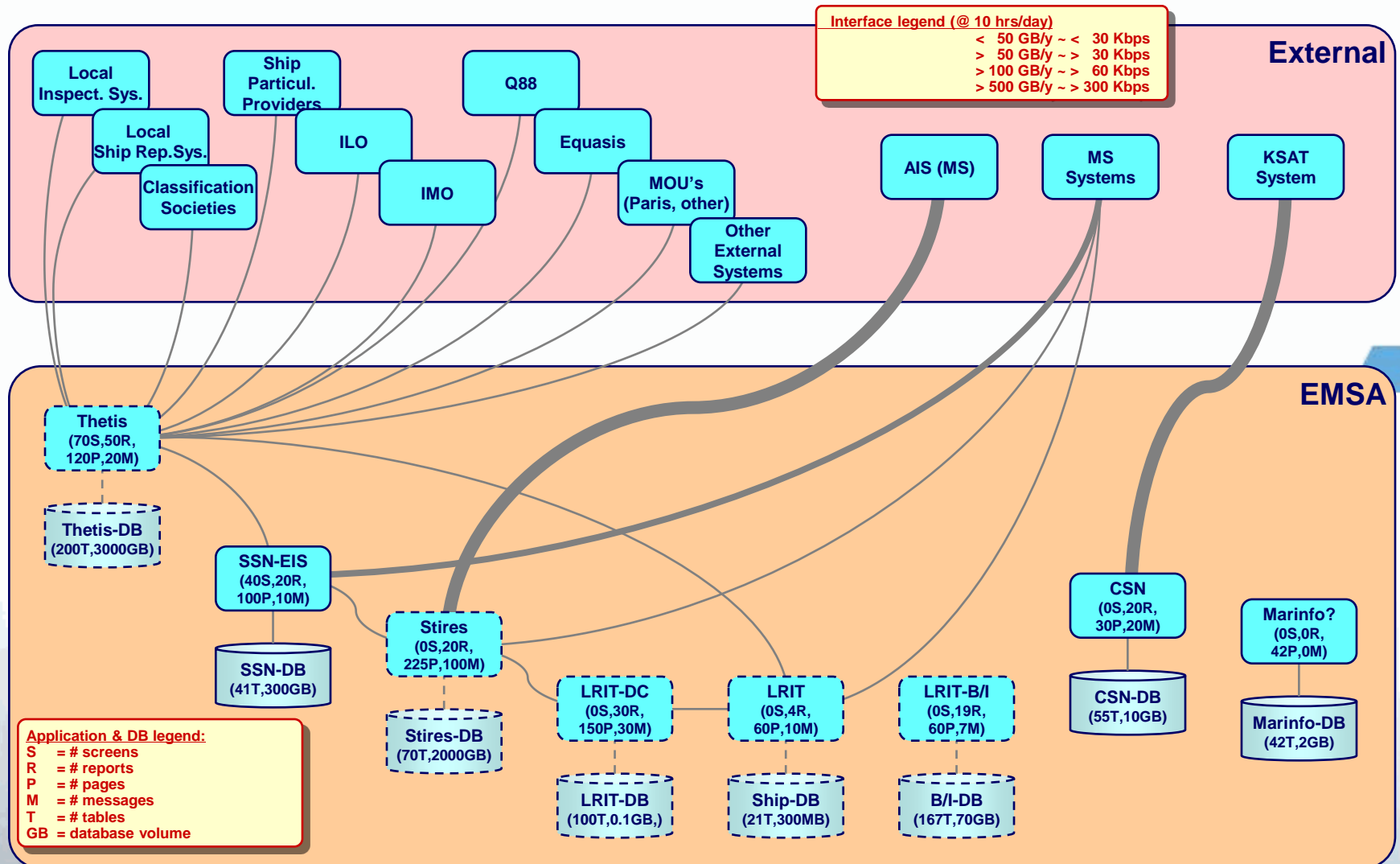
STIRES

Outsourced for  
2 years:

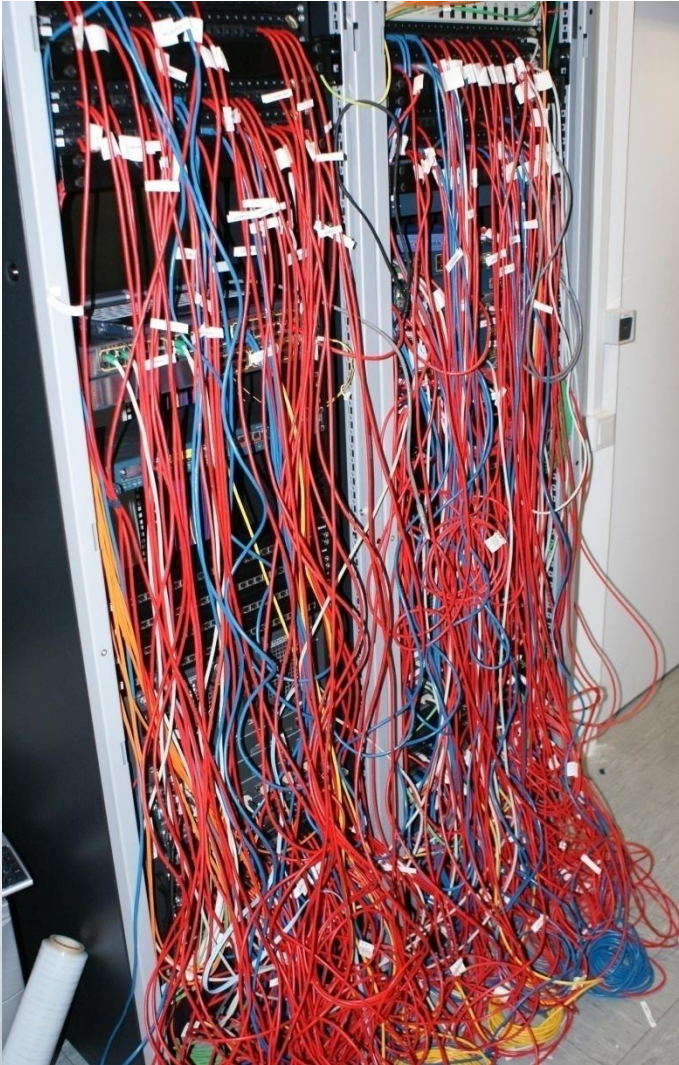
LRIT DC



# When it really meant.... Host this!



## Complication #1: The Existing Data Centre was full



## Complication #2: The new data centre room was not ready



## Complication #3: the new HQ had no 'permit to use' or lease agreement



## Complication #4: The ICT team had some unresolved issues



## Complication #5: We hoped to move by Christmas 2008...



## It had all the characteristics of a perilous journey...



## And could have ended badly





## But it didn't - all finished and working on time



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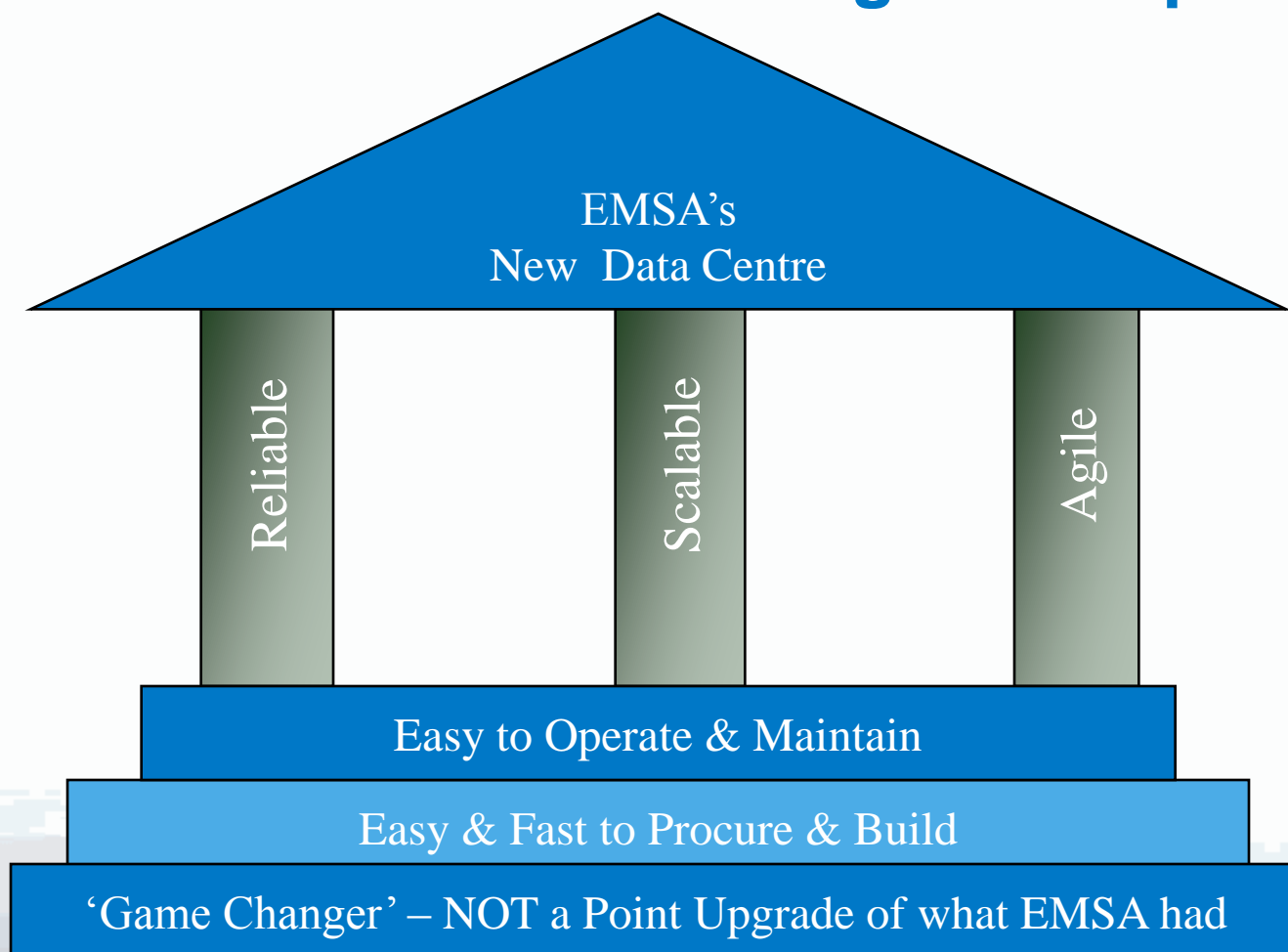
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# Architecture Drivers and Design Principles



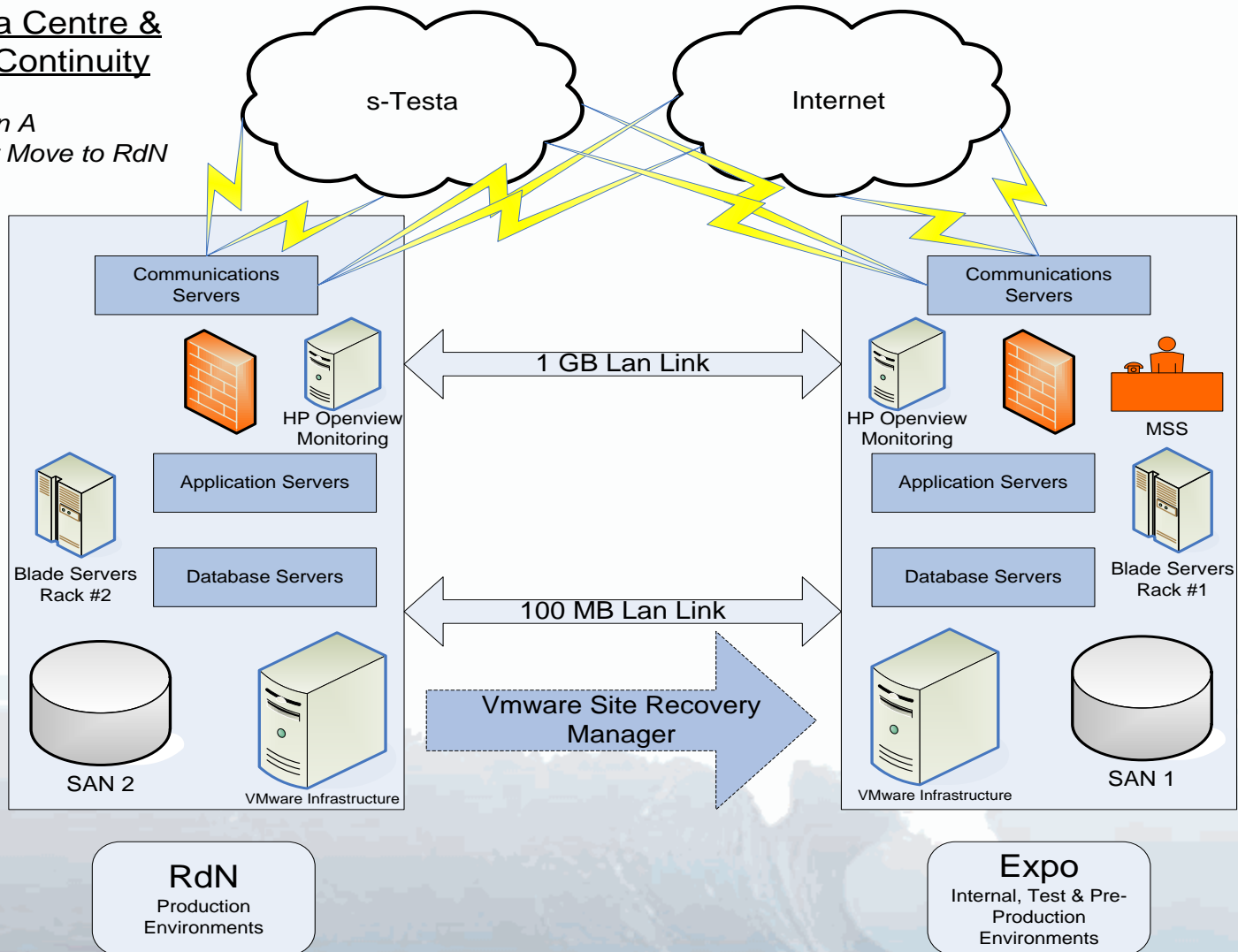
# Solution Architecture Choices

Driver	Solution	Hardware	Software
Easy to Build	Virtualisation	Blade Servers + SAN	VMware, Microsoft or Oracle
Easy to Operate	Virtualisation	Blade Servers + SAN	VMware
Easy to Procure	Use DIGIT Frame Contracts	HP 7000C EMC SAN	VMware
Reliability / Availability	Virtualisation	HP Insite Manager	VMware ESX3i + HA
Scalability / Agility	Virtualisation	HP Insite Manager	VMotion & DRS
Operate & Maintain	HP Openview or IBM Tivoli	HP Insite Manager	Numara + HP Openview
Business Continuity	Virtualisation	Duplicate Configurations	Site Recovery Manager

# Final EMSA Hosting Centre Design

## EMSA Data Centre & Business Continuity

Plan A  
Phase 1: Prior Move to RdN



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# Project Management Approach: Drivers and Design Principles

Desired Results  
Through Innovation,  
In-project Learning & Mastery

1. Must handle many intermediate steps
2. Able to back-track if needed
3. Can handle unknowns, changes & instability
4. Time or Effort-boxed

Fast & Flexible

Goal Driven

Fast Learning  
- yet Safe

So use an Approach suited to the Challenge

ALL Innovative Projects are

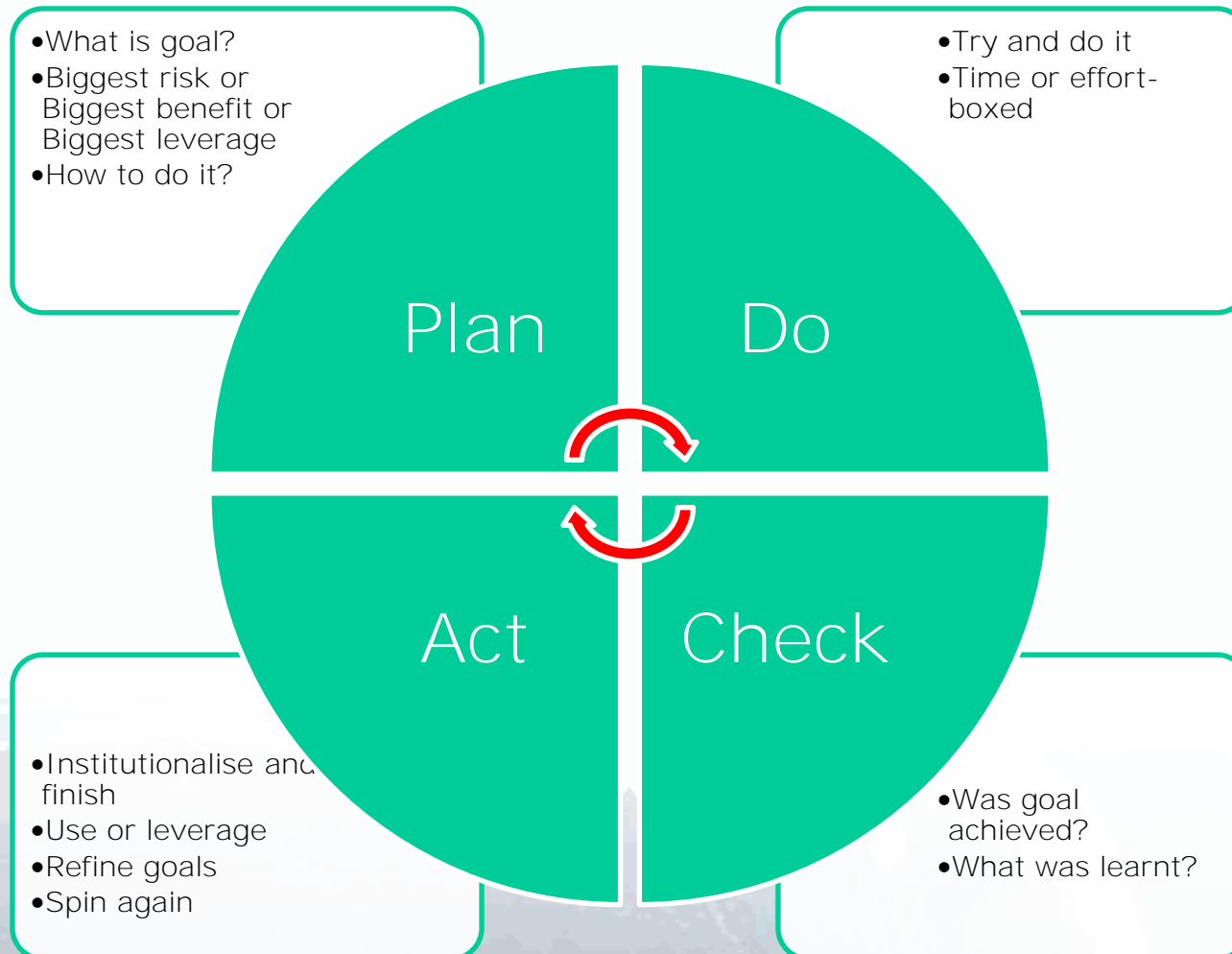
Most Projects are really 'expeditions into the unknown'

1. 'Virtuous' circles not 'vicious circles'
2. 'Try quickly' is 'discuss endlessly'
3. Safe to experiment & learn
4. So must be safe to fail & learn
5. Multi-staging approach
6. Testing and early use within team – 'Eat own dog food' principle
7. Know risks before hit them
8. Mastery thru re-use & learning

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1. Biggest risk next or biggest need next or biggest leverage next
2. Goals may change from spin to spin
3. Does not seek perfection – 'good enough' principle
4. It only works if it works in real life – 'Proof of the Pudding' principle
5. KISS principle – don't try and solve complexity with complexity - be ever vigilant
6. Balance risks versus results – early test of most important failure modes & security risks

# 'Best' Approach – Fast PDCA Cycles





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# Be Explicit about Core Values

1. Virtuous circles not vicious circles
  - Learning Organisation
  - Teamwork & **Active** Learning
  - **Try ... Learn .... Results ....Satisfaction ...Confidence**
2. Clear Vision of what we are trying to achieve
  - Short, fast P-D-C-A cycles to get results and learn fast
  - **When in doubt, 'safely try' rather than endlessly discuss**
  - Open door & no surprises
    - Inform while there is still time to do something constructive
  - Win-win                      Harmony not discord                      **Fun not fear!**
3. Leverage technology / external vendors / experts
  - **But don't become dependent on them**
4. Get and Keep the Credibility & Confidence of our Users
  - Deliver **Results and Service .... Not Promises or Excuses**

## Toyota Way Values



Challenge

Kaizen

Genchi Genbutsu

Respect

Teamwork

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- Goals:
  - to dramatically increase efficiency and effectiveness of team **during** project
  - Using, leveraging and 'proving' the developing project itself where possible
    - 'Eat own dog food' principle
- **KISS: Broadband 'tie' between our buildings**
  - To enable move of HQ to be independent of Data Centre build / move
- **Virtualization: 'Provisioning' of new Environments**
  - Without use of VMWare tools (including P2V) we could not have delivered all environments on time
    - Operational systems
    - Internal systems
    - Migration of old Data Centre from Expo to new HQ at RdN
- PRTG Monitoring tools
  - Quick and not-so-dirty monitoring of internal and external systems while waiting for Openview to be delivered
- Camtasia 'on-screen' recording and Wiki Team Repository
  - to speed 'learning and sharing' while avoiding writing lots of documentation
- Remote Access
  - **Use of Citrix 'GotoMyPC'** – while waiting for Remote Access VPN to be designed and built

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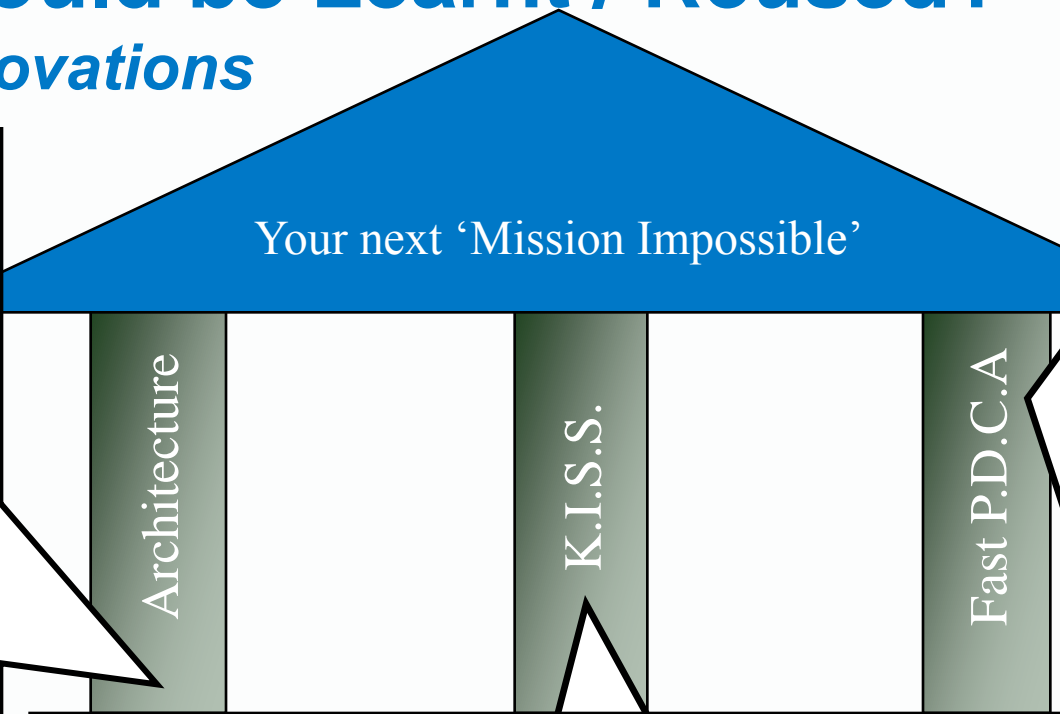
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# What could be Learnt / Reused?

## 'Best' Innovations

1. Technology can help here
2. Importance of a modular flexible architecture
3. **Must have: one, and only one, Solution Architect**
4. Minimise interfaces
5. Minimise dependencies
6. Good Architecture never stops



1. Fast small steps iso slow, big ones
2. Biggest risks first or biggest value first
3. Learn within the project
4. Test assumptions early
5. Expect setbacks
6. Act persistently
7. Fun not fear
8. Walk the talk
9. The proof of the pudding...

1. Without oil the motor soon seizes up
2. Respect starts at the top

Respect lubricates the Team Motor

Shared Core Values are the Glue that binds the Team

The Team is a Genius – if you stimulate it right

1. Share goals and values
2. Don't mix important roles e.g. PM & SA
3. Communicate, communicate, communicate
4. Learn by doing
5. Use effective ways to learn and share
6. Fun not fear
7. Celebrate victories

1. Keep it Simple
2. Safely test rather than endlessly discuss
3. Complexity is the enemy - be every vigilant
4. Don't try and solve complexity with more complexity – risky, expensive & unreliable

**THE 'PROOF OF THE PUDDING...'**  
**PRINCIPLE:**

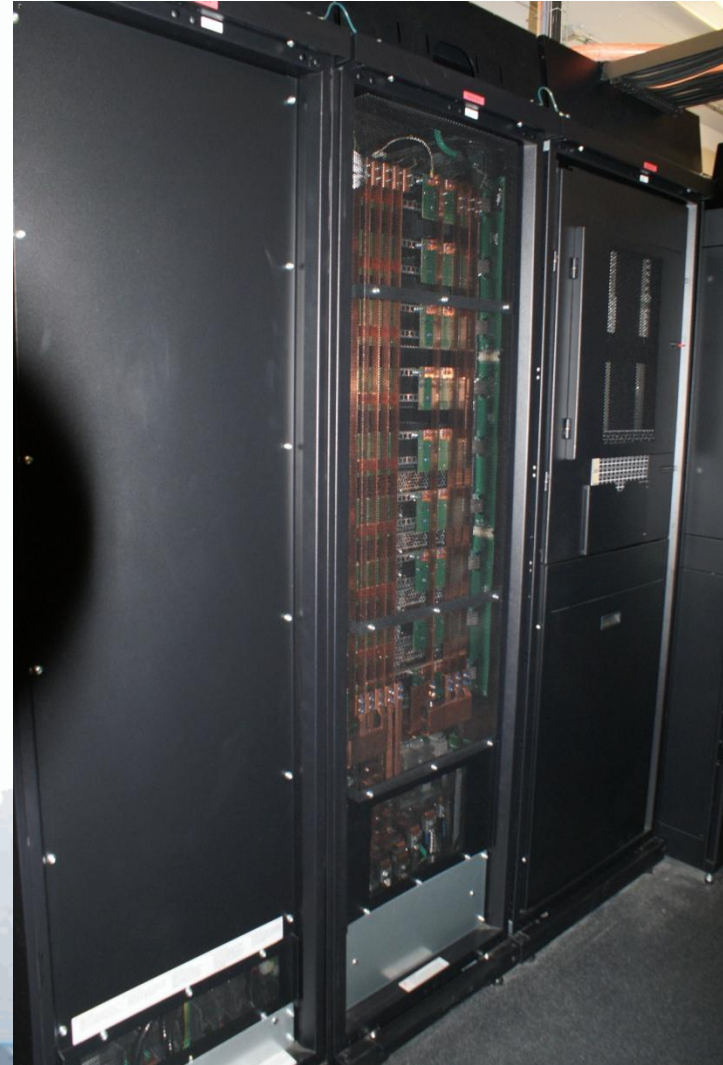
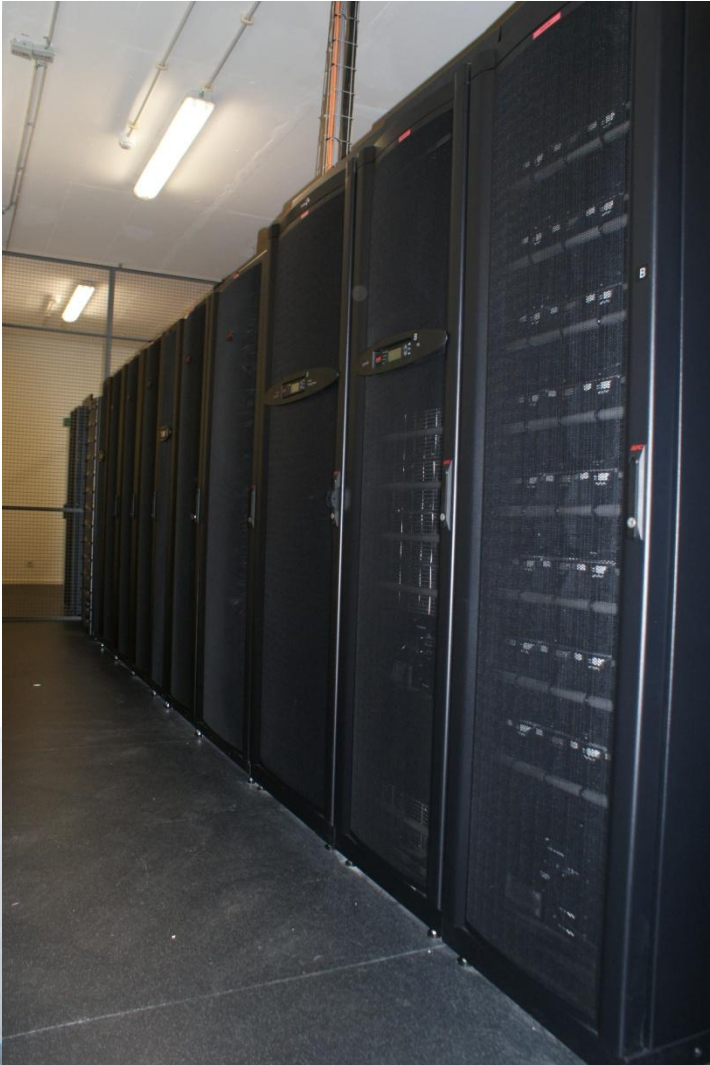
**WHAT WE ACTUALLY ACHIEVED  
AND  
THE LEVERAGE IT GAVE US FOR  
WHAT WE'RE DOING NOW**



# We built that state-of-the-art data centre



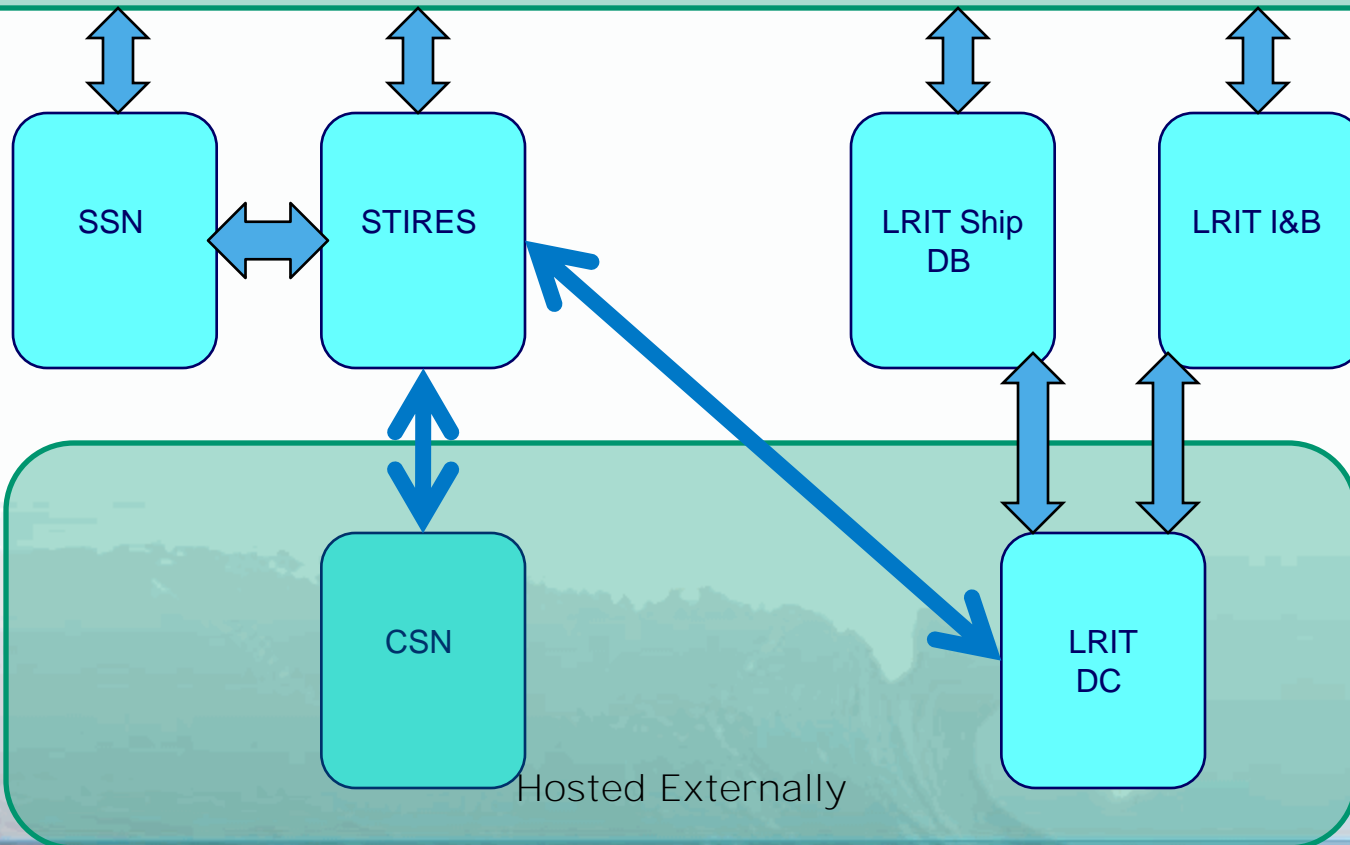
**... and it has been "in Production" for 8 months, hosting the EMSA Maritime Applications**



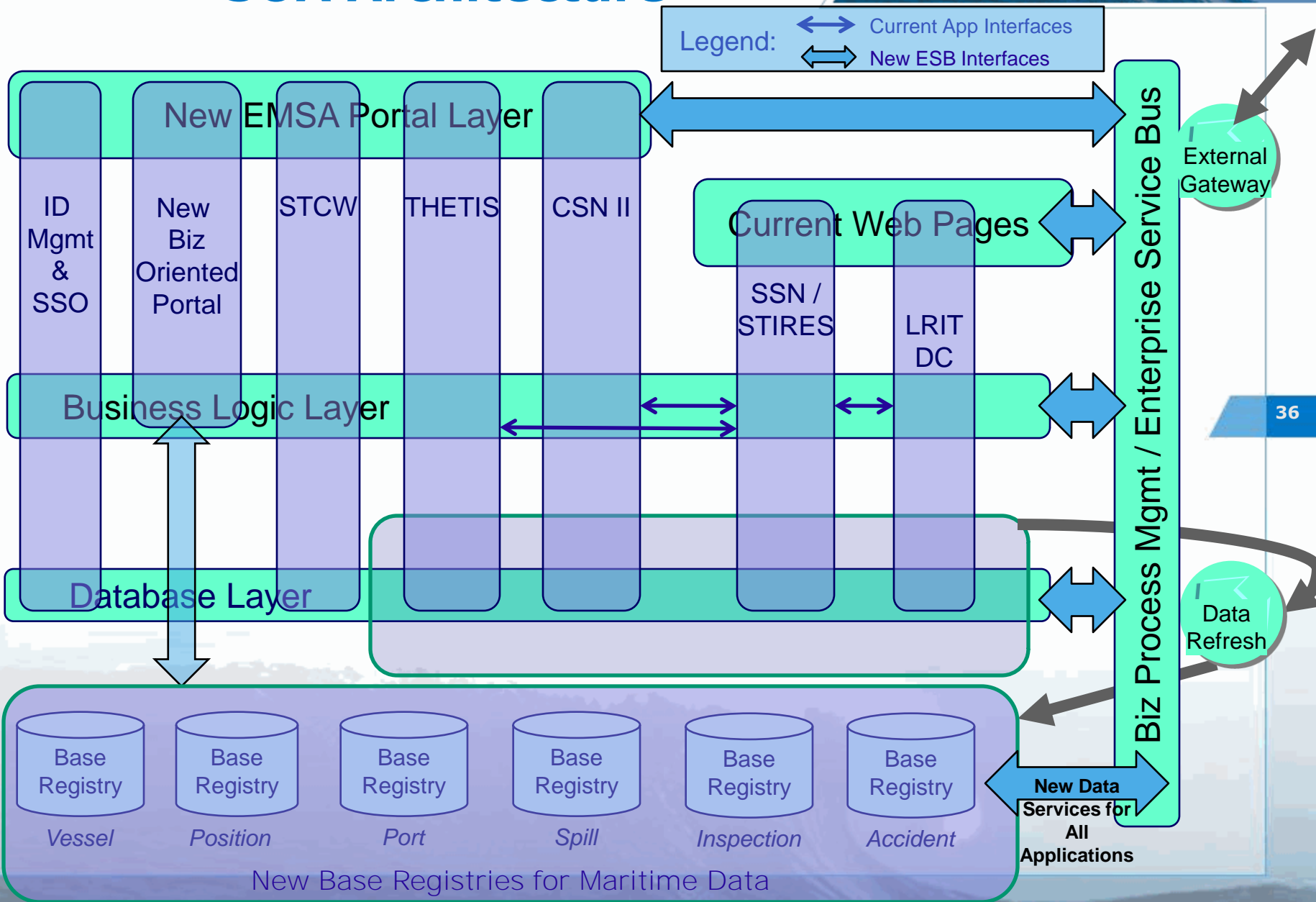
# And now we're busy with an equally big innovation in 'Enterprise Architecture'...

EMSA Security, Communications, Backup & Monitoring Infrastructure

Firewalls, Proxies, WAN Links, Backup & Monitoring Systems



# Into this new integrated SOA Architecture



# Thank you for your attention Now for your questions

*and in the words  
of an old friend of  
my family...*

*I'm all Ears...*

