Wipro Oil & Gas - Drilling & the Cloud ?
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Wipro - Drilling & the Cloud

- Agenda
  - Wipro Drilling, Completions & Wells
    - Introduction
    - What brought us to this point
  - Real Time Drilling Test Labs
    - Why the need
    - Challenges
    - The landscape
  - The Cloud
    - Benefits
  - Questions
    - Where next

Introduction - How we got to this discussion

- Leading Global Organisation with over 125,000 resources in 60+countries
- 40+ O&G customers, including all of the Top 6 Majors
- Proven Global AD Project Delivery to over 400+ clients
- Proven Innovation capabilities with the required experience

- In June this year Wipro completed the acquisition of SAIC's O&G Business
- Domain capabilities across entire E&P Value Chain
- Strong Consulting and Systems Integration Capabilities
- Strong relationships with product vendors whilst remaining agnostic

We now have the opportunity to truly see how enterprise IT solutions can help in E&P ……

"Can Cloud Based Solutions Benefit Real Time Drilling?"

“What Can The Cloud Bring To Drilling ?”

- Speed of Deployment
- Uptake of WITSML Standard
- Complex Architectures
- Multiple Vendors
- Multiple Service Organisations
- High cost of deployment
- High Investment to Initially Deploy

Drilling

- Low adoption in the O&G industry
- Security
- Data volumes
- Reputation as a Buzzword
- Confusion on where applicable
- Is it feasible
- What is it

Cloud

- Test Labs
- Real Time Drilling
- Data Management

Drilling on the cloud?

Real Time Drilling Test Labs - Why

Why are they needed

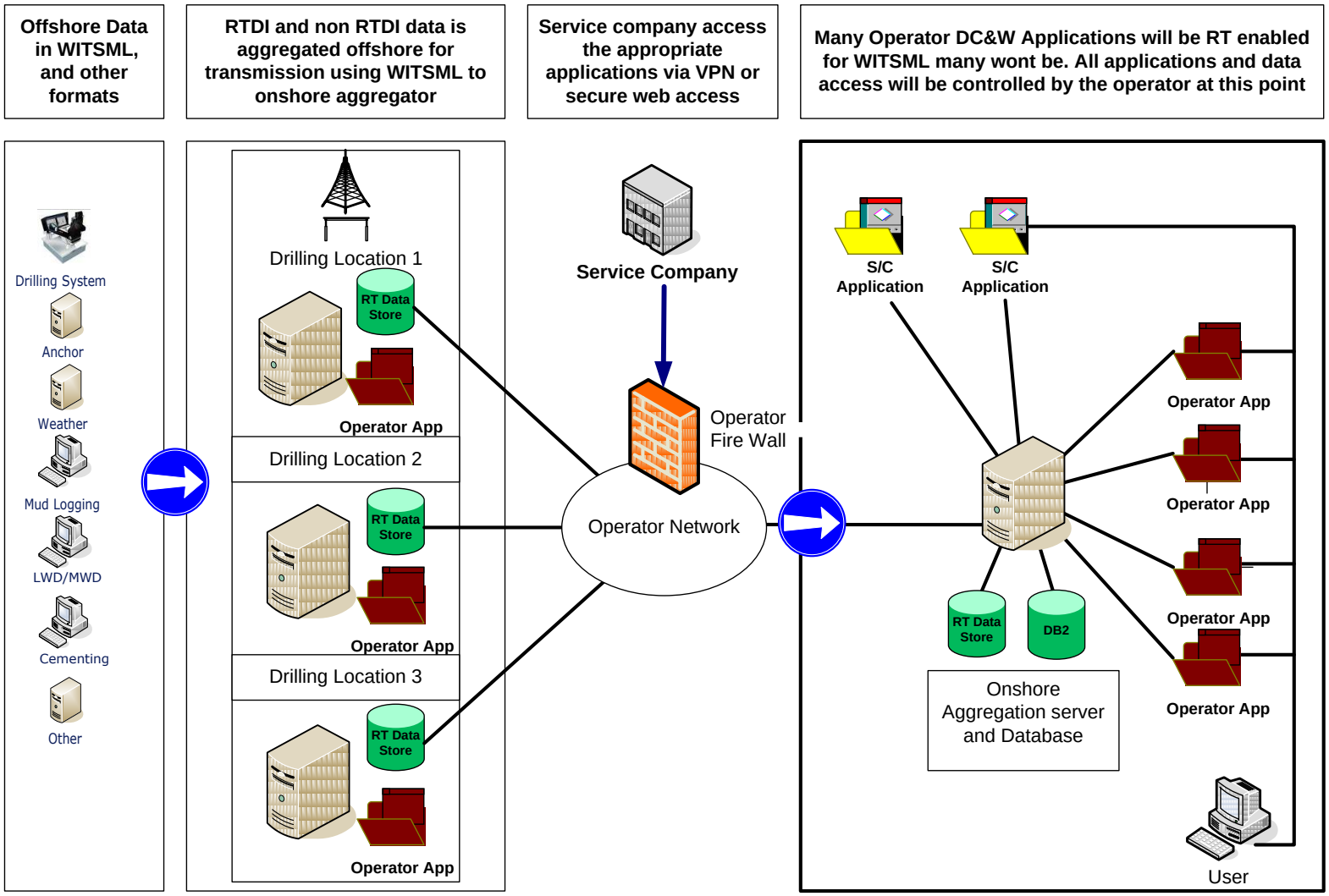
- Assurance pre drill
- WITSML exchange validation
- Trouble shooting
- Product enhancement
- Security assessment

Real Time Drilling Test Labs - Challenges

Challenges to address

- Time to deploy Application environment
- Cost of deployment
- Multiple data vendors
- Network limitations

Real Time Drilling Test Labs – The Landscape



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Cloud Approach and Benefits

Nittin Mittal

Cloud Based Real Time Drilling Test Labs

- Lab On Demand - Benefits

Lab-on-Demand

- Service offering for cloud deployments for non-production labs
- Optimization of customer's existing IT infra investments
- Caters to dedicated / fixed demand for pre-production environments

Common Characteristics

- Dynamic, automated, self-service provisioning of virtualized lab of Servers and shared storage pool. Ideal for pre-production environments (including Dev, Test, Training and Demo)
- Pre-configured software stacks that are used to create complex lab environments using "drag and drop"
- Cloud based pay per use model as $/VM hour.

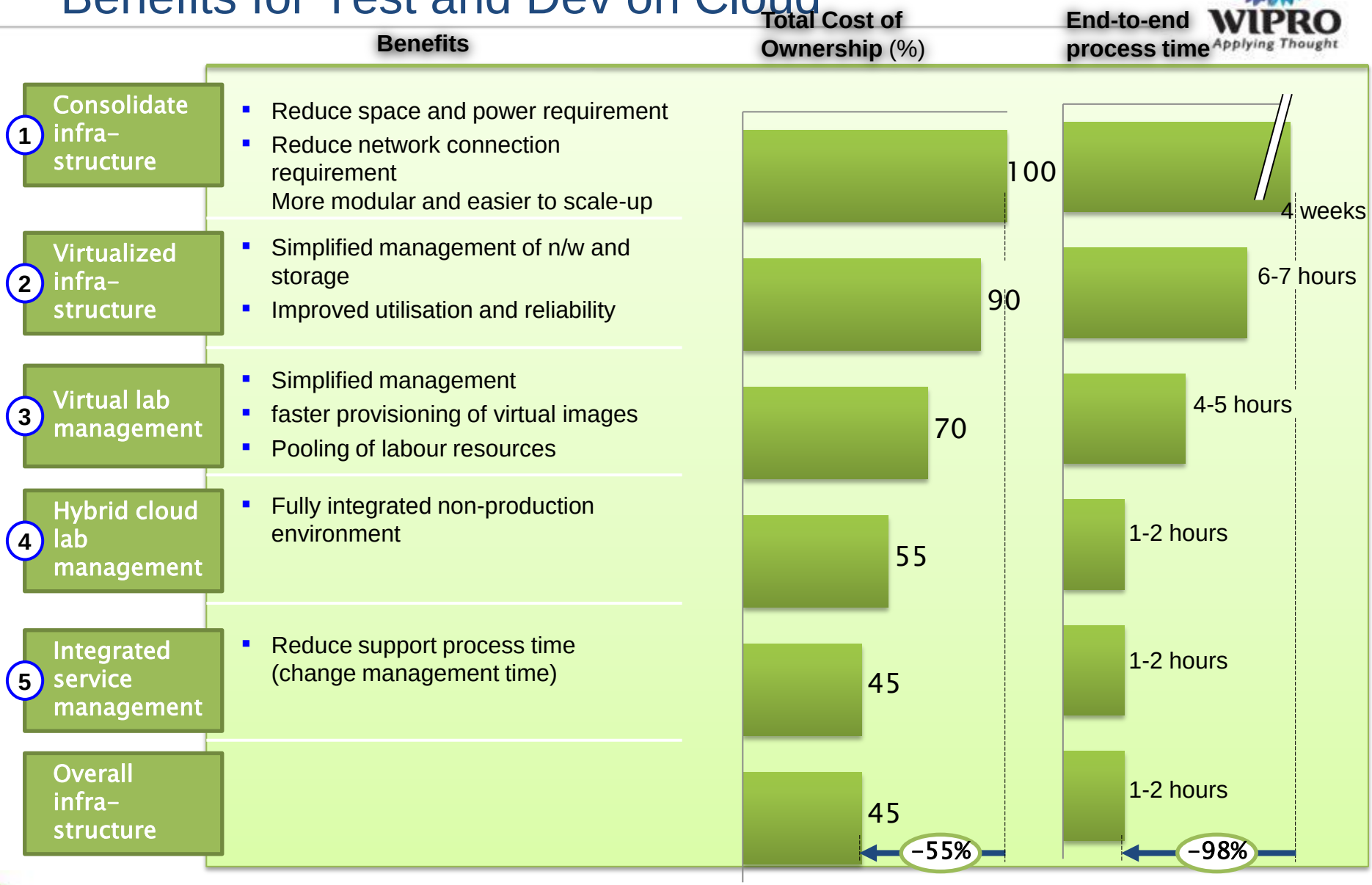
Benefits**

- Faster provisioning of complex lab environments (80% reduction in provisioning time)
- Reduced costs of building (Capex) and managing complex Lab environments (Opex)
- Increased productivity of developers/testers through Automation and Collaboration
- Improved Quality of Testing through better simulation of production environment

** Voke Research – VLM Market Snapshot

Cloud Based Real Time Drilling Test Labs

- Benefits for Test and Dev on Cloud



“What Can The Cloud Bring To Drilling ?”

Drilling

- Speed of Deployment
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Cloud

- Data centres are a type of cloud
- It is more than a buzzword, but we are still planning the journey
- It is feasible but in small bites
- Still need to validate how widely it is applicable

Drilling on the cloud?

- Test Labs
- Real Time Drilling
- Data Management

Cloud is an enabler not the solution

Where Now?

Wipro

- Engage with operators and vendors to gauge appetite
- Understand the impact of integration with SCADA systems

You

- Are you about to deploy test bed architecture ?
- Next time you need to validate WITSML transfer mechanisms how do you plan to approach?
- How are you currently planning to deploy Real Time Drilling Systems ?

Questions