Safe Harbor Statement

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The Cutting Edge on IT: Contemporary Trends in Public Financial Management Systems

ICGFM International Training Conference
Miami, 16th May, 2017

Peter Erdosi
Director PFM Business Development – Oracle ECEMEA
Executive Summary
Evolution of Government Financial Management Information Systems

- First generation, transactional Treasury systems
- Maximizing the performance of legacy systems / platform optimization
- Introducing new features and support the bespoke-to-COTS transition
- Moving from FMIS to IFMIS and expanding the IFMIS to the whole of government, integration
- Preparing for the next generation applications (open standards, interoperability, modern user interface, etc.) and the performance “link”
- Leveraging the latest deployment options
- Moving towards mobile and inclusive PFM in seek of further transparency, accountability and policy relevance

DIGITAL IS CHANGING EVERYTHING
Implementation of complex GFM Information Systems tend to focus too much on IT and internal efficiencies...

...sometimes missing on the ultimate economic and social objective

Why do we do what we do?
Who do we serve, what are our priorities?
External stakeholders want more transparency, accountability, generally, they got more active. We’ve all seen the feedback.

Social Media Comments

Survey Results, international benchmarking

Government Customer Experience/Service Rankings
What fuels this renewed activism, what are the prerequisites of this change in attitude?

Digital transformation changed the world, the way we live and interact.
A lot has... changed.
What Drives the Change?

- Mobile
- Social Network
- Big Data
- Analytics
What is the Cloud?
What is the Cloud?

(...) a **model** for enabling convenient, on-demand network access to a shared pool of configurable computing resources (...)
On Premise

- Applications
- Data
- Runtime
- Middleware
- O/S
- Virtualization
- Servers
- Storage
- Networking

IaaS

- Applications
- Data
- Runtime
- Middleware
- O/S
- Virtualization
- Servers
- Storage
- Networking

PaaS

- Applications
- Data
- Runtime
- Middleware
- O/S
- Virtualization
- Servers
- Storage
- Networking

SaaS

- Applications
- Data
- Runtime
- Middleware
- O/S
- Virtualization
- Servers
- Storage
- Networking

Resource Owners

Subscriber

Service Provider
• 17 undersea cables, 4 more planned
• Terrestrial transmission networks doubled in last 5 years
• 1M+ route - kilometers in 2015
• 45.8% Of Sub-Saharan Africa within reach of fibre networks

Source: Hamilton Research
How can then governments, and more specifically PFM systems cope with the pace Digital is setting?
Modern and Smart Governments are enabled by Cloud, Mobile, and Social solutions

- Applications as a Service
- Platform as a Service
- Infrastructure as a Service

- ERP
- HCM
- Social Relationship Management
- Policy Automation
- Customer Experience
- Talent Management
- Planning & Budgeting
Cloud computing holds considerable promise for PFM

Selected benefits of Cloud computing

**Scalability** – applications and data can be delivered to any number of users, as needed

**Flexibility** – providing online access to large data files over any internet-enabled device, avoiding limitations of older workstation technologies

**Fast deployment** – new applications can be up and running very quickly

**Reliability, fault-tolerance** – large scale cloud server installations provide redundancy and ensure availability

**Accessibility** – the internet enables coverage of wide geographic areas, establishing the government’s presence across its territory

**Best of breed computing** – users have access to automatic software upgrades that may not be feasible to own in-house

**Shared overheads** – the burden of managing data centers and supporting end users is placed in the hands of skilled professionals

**Focus on core business competency** – freed from data center administration and no need to compete to acquire IT skills

**Reduced Total Cost of Ownership (TCO)** – users pay for use, not for the acquisition and support of hardware, software, facilities, etc.

**Simplified expenditure** – pay-for-use, single and flexible, predictable monthly O&M charges simplifying budget forecasting

**Economies of scale** – large providers can negotiate procurement contracts on preferential terms

**Security** – cloud providers implement multiple layers of protection over physical facilities, applications and customer data that is often superior to in-house data centers

Source: PFM Blog, IMF – Clouds on the horizon
There are multiple options with Cloud

<table>
<thead>
<tr>
<th>Deployment Model</th>
<th>Service Model</th>
<th>Operating Model</th>
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<tbody>
<tr>
<td>Private</td>
<td>Applications (SaaS)</td>
<td>Customer Owns</td>
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<td>Customer Operates</td>
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<td>Public</td>
<td>Platform (PaaS)</td>
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<td>Provider Operates</td>
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<td>Hybrid</td>
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<td>Provider Owns</td>
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<td></td>
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</tbody>
</table>
2016 Cloud Platform Compatibility, Migration & Coexistence
Identical Software and Hardware On-Premise and in Cloud: Third Customer Choice

Application and Data Portability

On Premises
- Licensed software
- Your choice of hardware
- Managed by you

Oracle Cloud
- Subscription service
- Managed by Oracle
- Behind your firewall
- Faster, lower cost networking

***Announcing***
Cloud at Customer

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Oracle Cloud at Customer

Complete Deployment Choice

Exact Same Oracle Public Cloud Services Deployed on Customer’s Premises

- IaaS
- Database
- Java
- Integration
- Exadata
- Big Data
To realize the full potential of latest technologies the PFM cycle needs to be decomposed and new questions need to be answered

- What does public really mean in PFM, which functional processes can be "public"?
- What are the data sources, is data being created or consumed?
- Do systems really support policy implementation and related governance?
- Where and when do we have peak loads for different functional processes?
- What are the prerequisites for longer term sustainability? What are the real costs of operations and maintenance?
- Where are the missing integration points, how can those be overcome?
- Where are the interfaces with the constituent, where and how can service be improved?
- What and where are the security concerns?
- Where are the bottlenecks in terms of flexibility, scaleability?

Source: World Bank
A personalized path can be selected to support the journey to the Cloud, mitigating risk and cost
Journey to the Cloud
Journey to the Cloud

1. Start with SaaS
2. Integrate SaaS & On-Prem
3. Extend SaaS for Social, Mobile, Process
4. New App Development

Business Transformation
Cloud Platform
SaaS

Start with PaaS

Mobile App Development

Content and Process

Digital Engagement

Journey to the Cloud

Business Operations

Cloud Platform

Business Transformation
Journey to the Cloud

Start with IaaS

Dev/Test

Production, High Availability

Big Data, Data Management

Cloud Platform

Business Transformation

Business Operations
Journey to the Cloud

Start with Systems
Consolidation, Engineered Systems
High Availability, Cloud Archival
Run Public Cloud Behind Firewall

Business Operations
Cloud Platform
Business Transformation
Journey to the Cloud

- SaaS
- PaaS
- IaaS

Systems

Cloud Platform

Business Transformation

Business Operations
Integrated Cloud
Applications & Platform Services