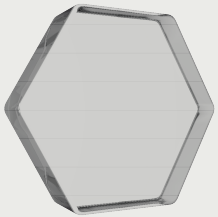
Implementing a Big Data Strategy
PRASA Passenger Rail Agency of South Africa



EBCONT

MarkLogic World 2016
San Francisco

EBCONT proconsult, Millennium Tower, Handelskai 94–96, A–1200 Vienna

Agenda

- Introduction
- About the customer
- Project Goals
- Challenges
- The Solution
- Demo

Introduction

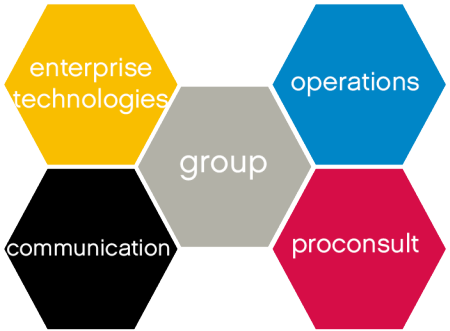
Alexander Deles

CEO, EBCONT

- More than 20 years experience in IT
- MarkLogic Partner since 2011
- EBCONT delivered more than 20 MarkLogic projects successfully

Johannes Litschauer, Alexander Deles
- Enterprise Solutions
- Big Data Handling & Analytics
- Mobile Business Solutions

Johannes Litschauer, Alexander Deles
- IT-Infrastructure und operations
- Cloud / elasticity



Leopold Machacek
- Corporate Design & Identity
- Marketing Strategy
- Web coneption & UX design
- Mobile & interface design

Johannes Litschauer, Alexander Deles
- Quality Assurance
- IT Consulting
- Analysis

EBCONT group

EBCONT is a leading Austrian provider of IT, communication and personnel services. Established in 2000, its founder Rupert Weissenlehner still privately owns the company. Initially positioned as a pure IT service provider, EBCONT used its first ten years of systematic development and stable growth to consolidate a corporate structure in 2010.

Employees	**550+**
Turnover	**52 Mio. Euro**
Owner	**Rupert Weissenlehner**
Focus	**IT, Communication**

Award: EBCONT is MarkLogic Partner of Excellence!

The Customer

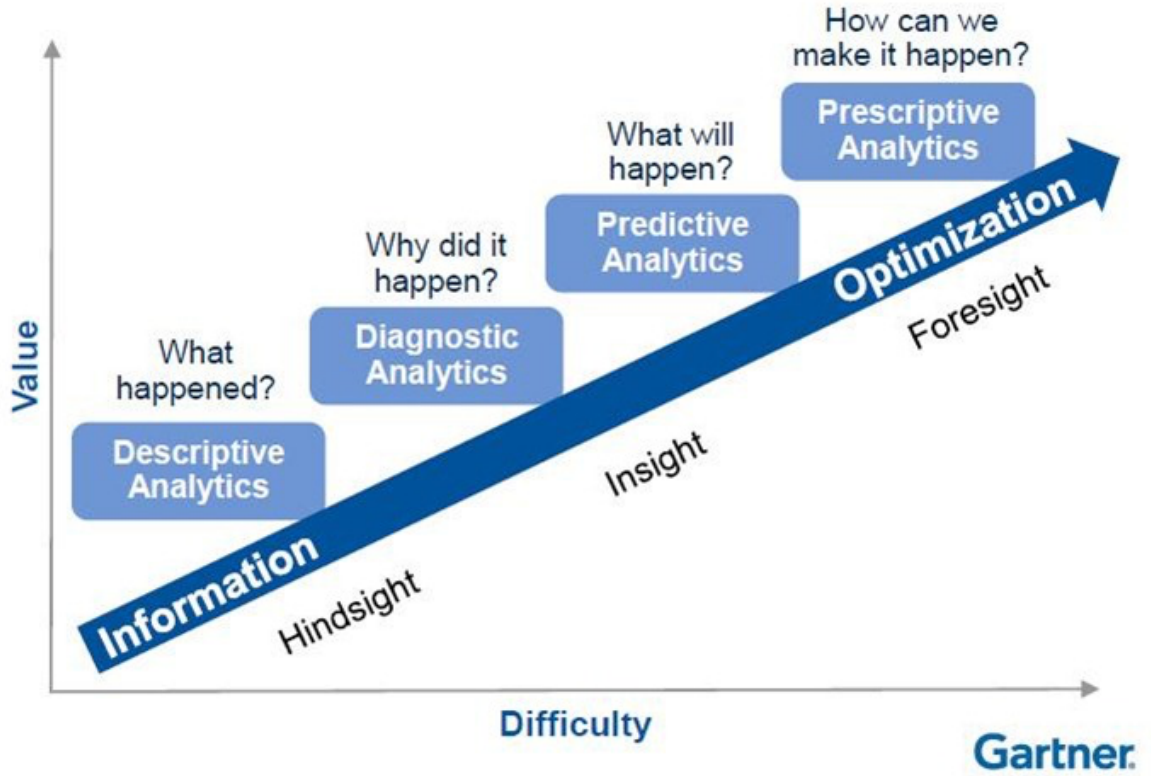
Passenger Rail Agency of South Africa

PRASA – BE MOVED

Name	**PRASA**
Industry	Passenger rail
Founded	1990 (as SARCC)
Headquarter	Hatfield, Pretoria
Revenue	ZAR 4.2 billion (USD 275 Mio.)
Employees	500,000 (whole group)

Project Goals

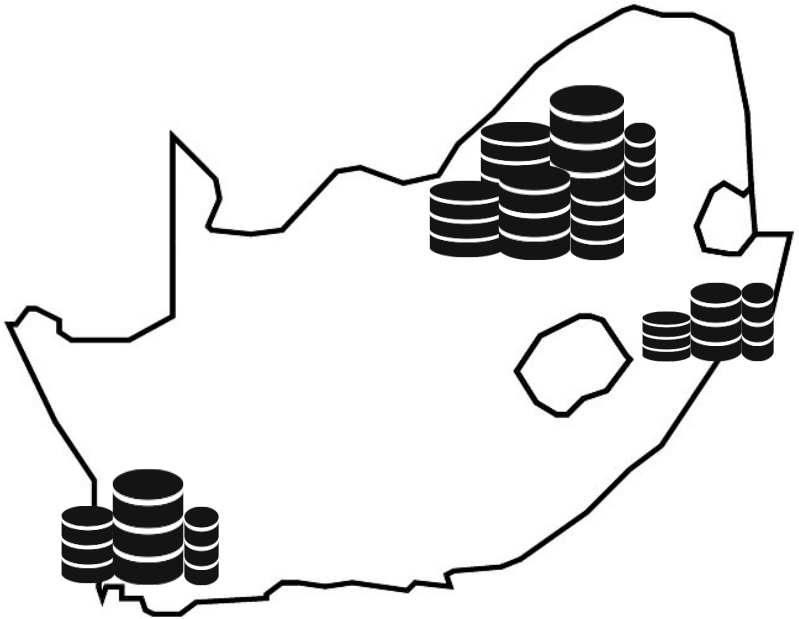
Digital Evolution



Overall Goals

- Create a Data Strategy
- Define a data centric enterprise IT architecture
- Define a data centric interface strategy and workflow for all IT systems
- Deliver Proof-of-Concept
- Implement
  - Reference Implementation
  - Reference Infrastructure

Goals



- 360 degree overview
- Standardize reporting
- Improve quality of service
- Fraud detection
- Geo spatial data / heat maps
- Point-in-Time analysis
- Alerting
- Root cause analysis
- Virtualize data
- Ease of use – use everywhere with:
  - Desktop PC
  - Tablet
  - Smartphone

Why Data Virtualization?

CRM, Web CMS, Marketing, Ticketing, Contact centers, HR, Counters, Incident Management, Schedules, etc.

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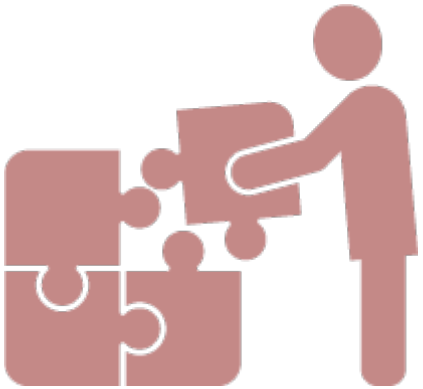
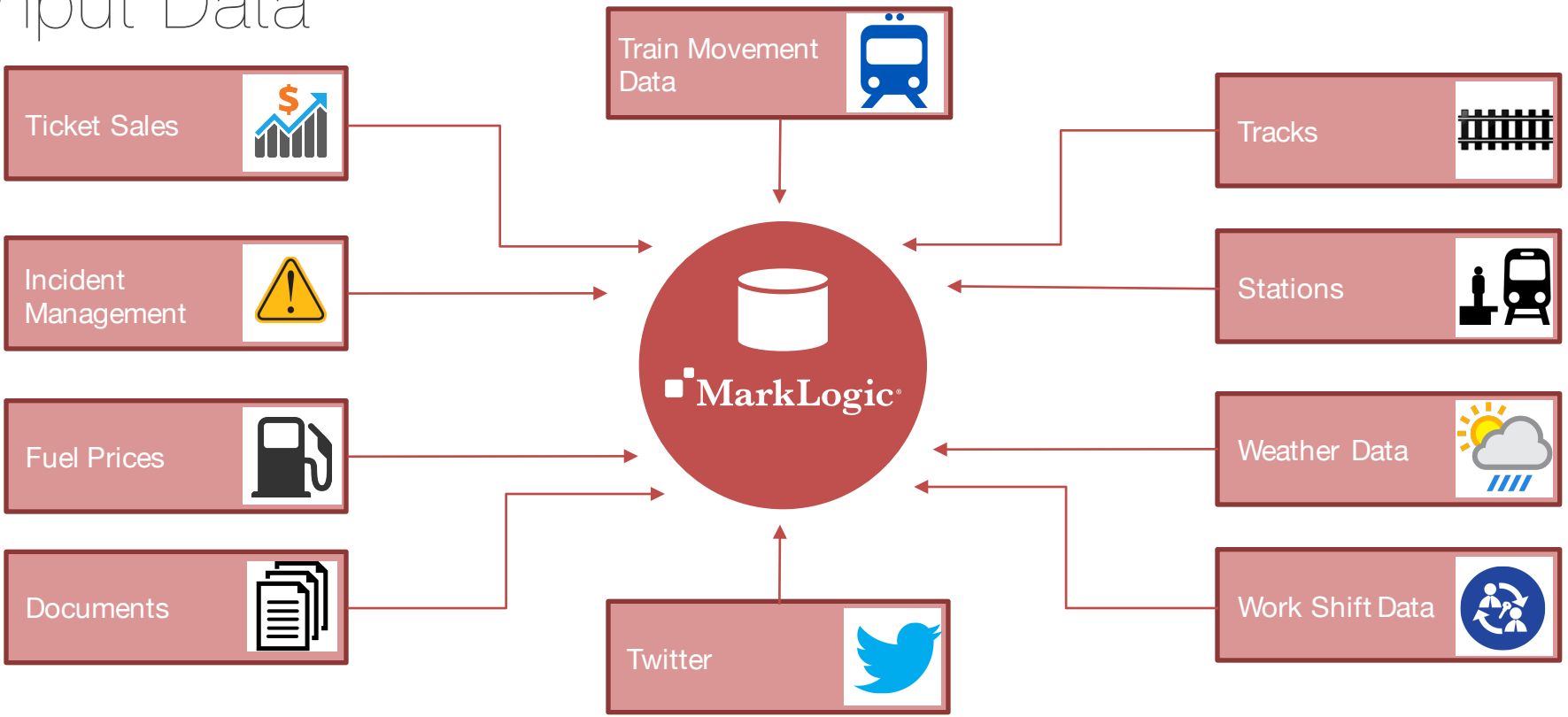
Challenges

Challenges



- Variety of data
- Different systems and formats for the same purpose
  - e.g. more than one incident management system
- Data quality
  - Different coverages
- Data linkage
- Different languages
  - English
  - Africans

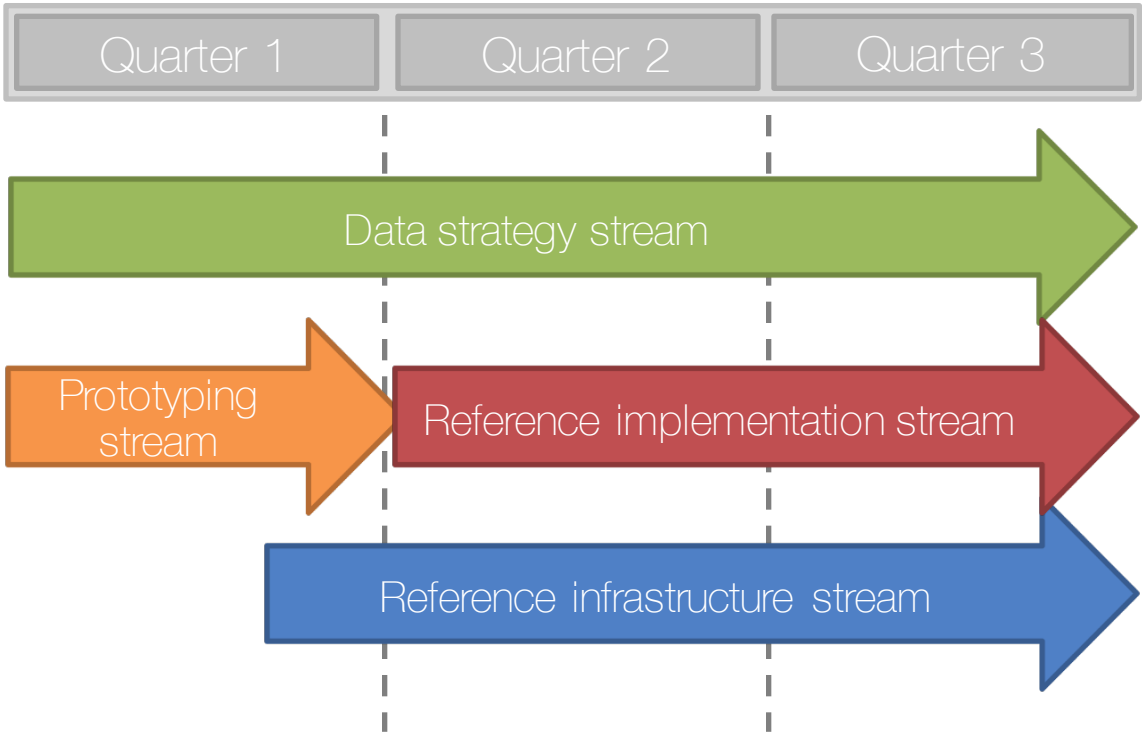
Input Data


Ticket Sales
Incident Management
Fuel Prices
Documents
Train Movement Data
Twitter
MarkLogic
Tracks
Stations
Weather Data
Work Shift Data

Different Perspectives

Solution

Project Streams



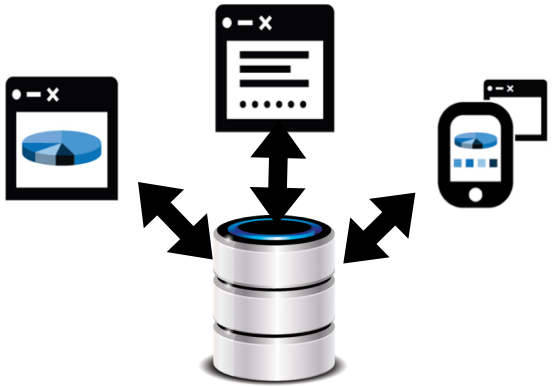
Ingredients

1 CONCEPT

Bi-Modal IT

2 APPROACH

Data Centric



3 TECHNOLOGIE

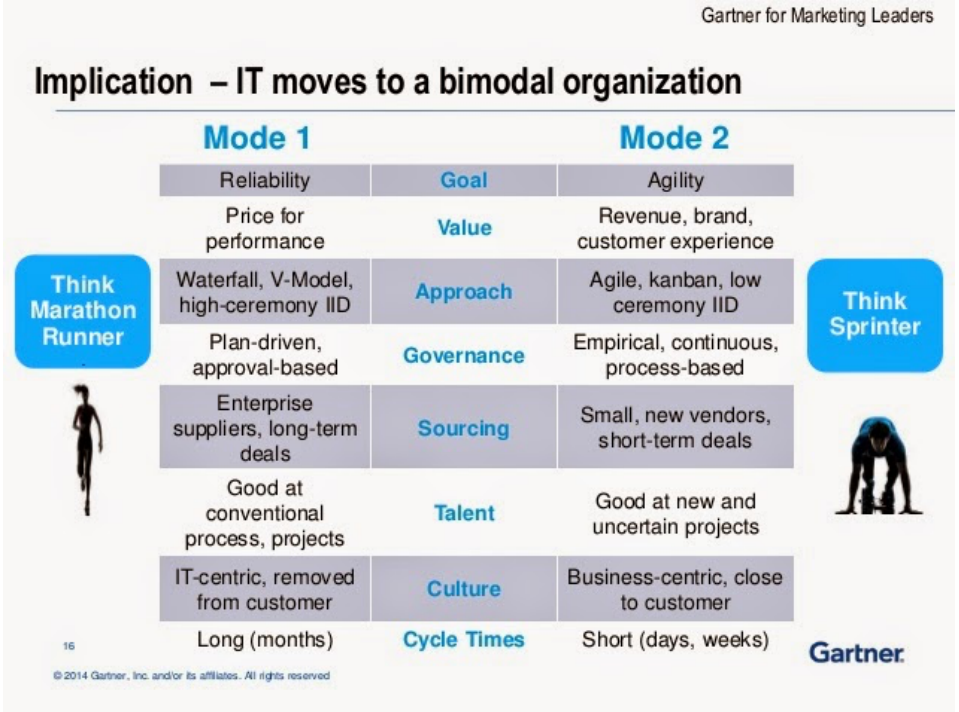
MarkLogic™

Next Generation Database – Enterprise NoSQL

"For all your data!"

- Schema-agnostic
- Massive scale
- Query and search
- Analytics
- Application services
- Semantics
- Geo Spatial

Bi-Modal IT


Gartner for Marketing Leaders
Implication – IT moves to a bimodal organization
Mode 1
Mode 2
Reliability
Goal
Agility
Price for performance
Value
Revenue, brand, customer experience
Think Marathon Runner
Waterfall, V-Model, high-ceremony IID
Approach
Agile, kanban, low ceremony IID
Think Sprinter
Plan-driven, approval-based
Governance
Empirical, continuous, process-based
Enterprise suppliers, long-term deals
Sourcing
Small, new vendors, short-term deals
Good at conventional process, projects
Talent
Good at new and uncertain projects
IT-centric, removed from customer
Culture
Business-centric, close to customer
Long (months)
Cycle Times
Short (days, weeks)
16
Gartner
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So - What's the plan?

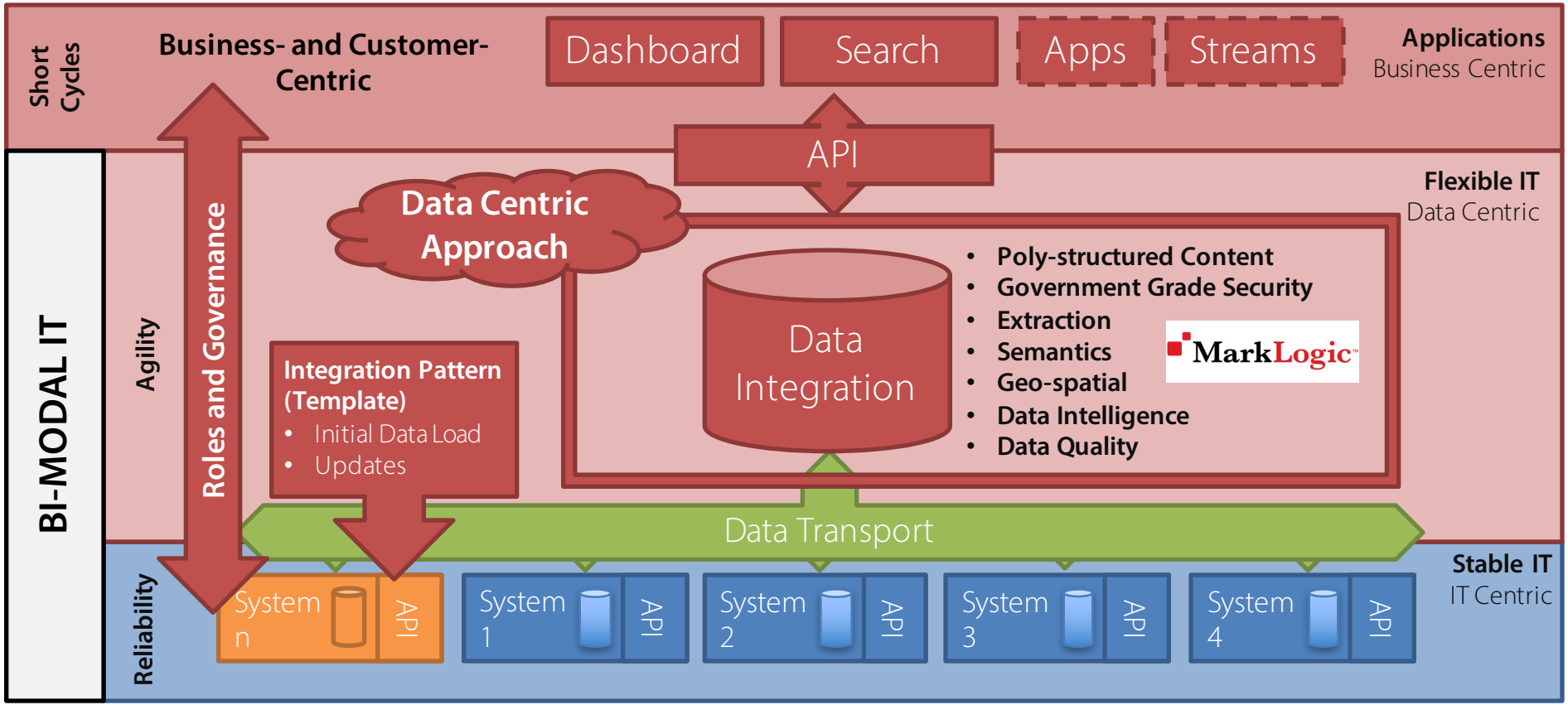
Plan A:

- Put yesterday's architectures, methodologies and processes on steroids
- Consolidate and standardize
- Have a smaller number of larger and more complex monolithic applications
- Hope

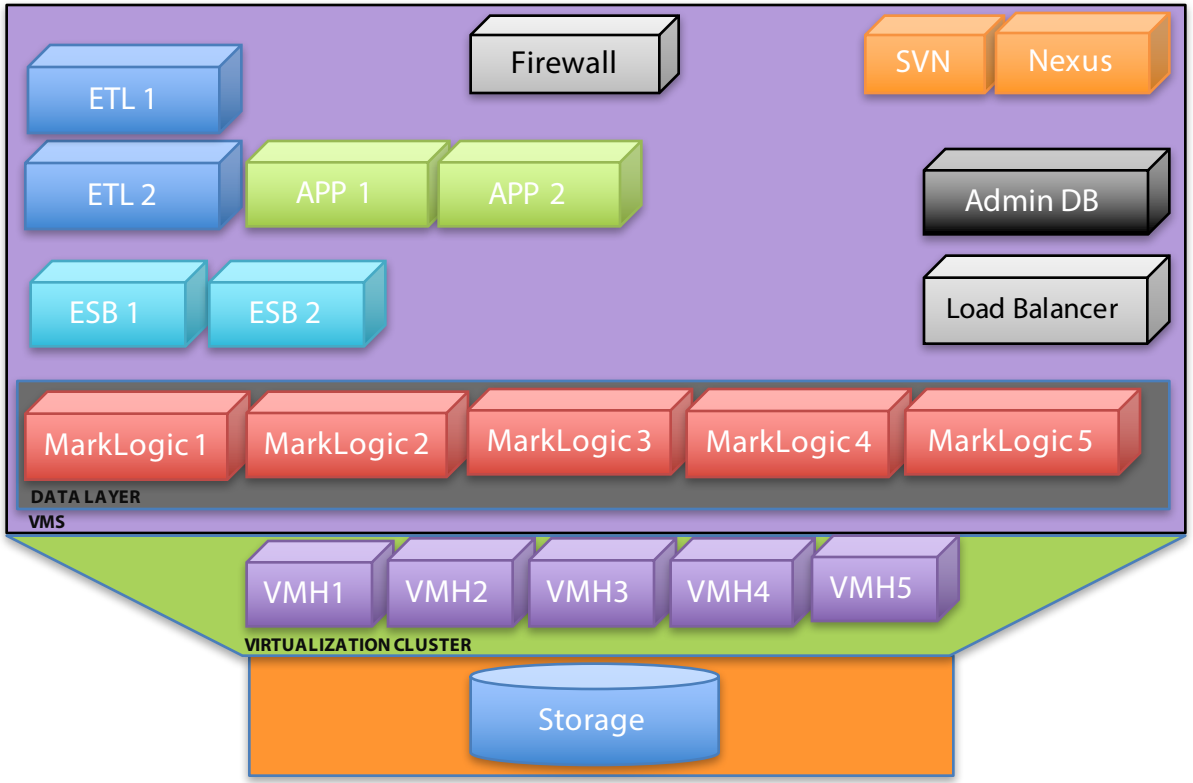
Plan B(imodal):

- Transition to 21st-century software delivery architecture
- Differentiate and innovate
- "Think global, act local"
- A solid central base of services built for robustness, reliability and predictability
- A lightweight flexible service orchestration layer

Gartner


Short Cycles
Business- and Customer-Centric
Dashboard
Search
Apps
Streams
Applications
Business Centric
API
Flexible IT
Data Centric
Data Centric Approach
Data Integration
Poly-structured Content
Government Grade Security
Extraction
Semantics
Geo-spatial
Data Intelligence
Data Quality
MarkLogic
BI-MODAL IT
Agility
Roles and Governance
Integration Pattern (Template)
Initial Data Load
Updates
Data Transport
Reliability
System n
API
System 1
API
System 2
API
System 3
API
System 4
API
Stable IT
IT Centric

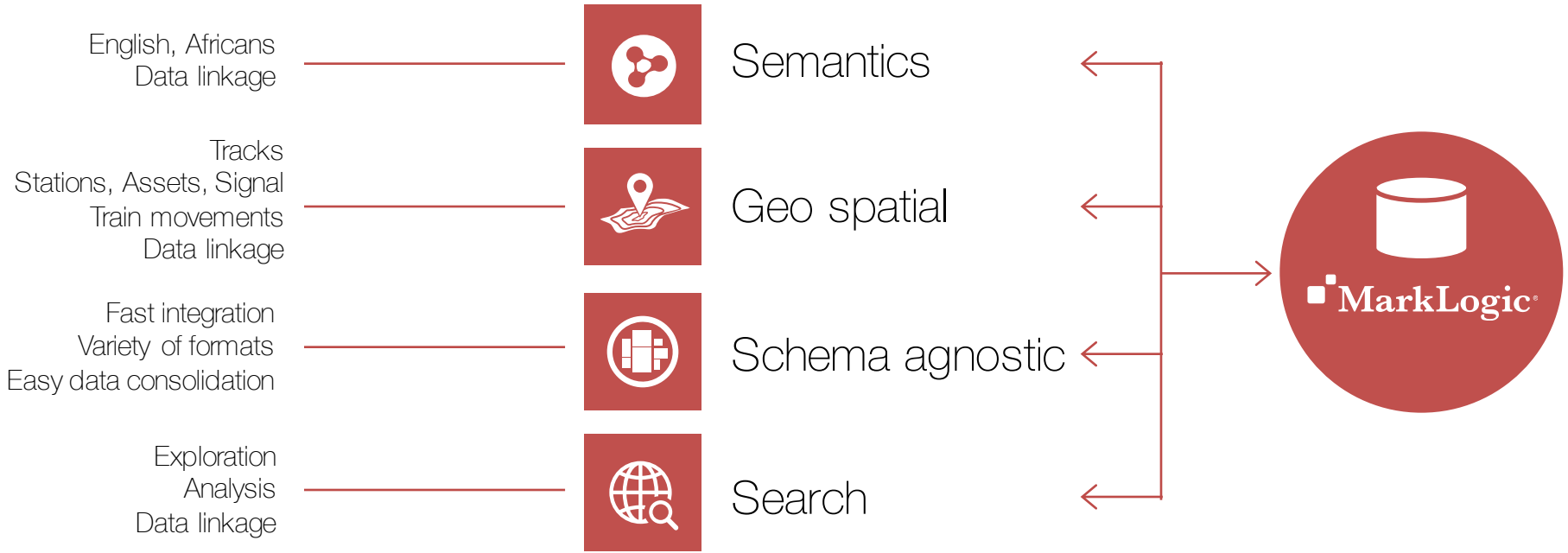
Scalable Reference Infrastructure



Technology stack

- Apache Loadbalancer
- Red Hat Enterprise Linux
- VM Ware Cluster
- NETAPP (Storage)
- HP (Server)
- Astaro (Firewall, virtualized))
- Zabbix (Monitoring)
- Veeam (Backup)

How MarkLogic helped



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Live Demo

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Any Questions?

Thank you for your attention!

EBCONT proconsult GmbH

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WE ARE LOOKING FORWARD TO INTERESTING DISCUSSIONS