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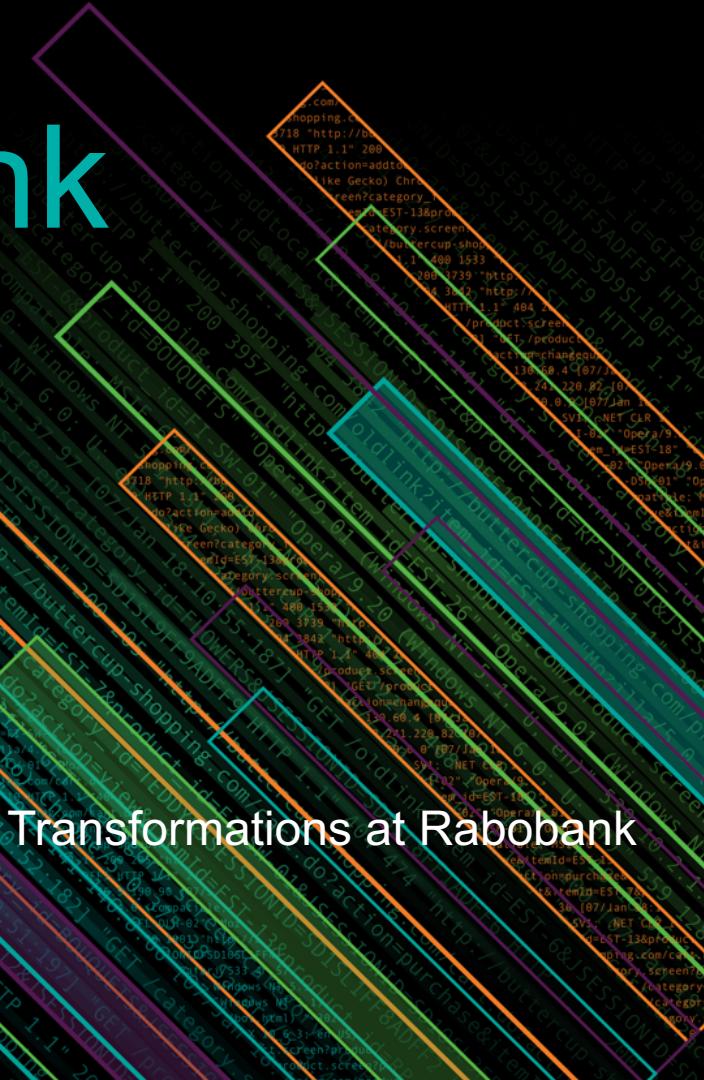
ITSI and IBM Z at Rabobank

How Rabobank Gains Visibility Into Instant Payments

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The Digital Economy is Forcing Businesses to Transform



Explosion in transaction growth

driven by mobility and the Internet of Things

IT-driven business agility

*for delivering service,
security, and efficiency*

Analytics is moving to real time

*to capture new
opportunities at the point
of impact*

The IBM Z Mainframe Has A Vital Role In The Digital Economy

Mainframes process
30 billion business transactions per day

Mainframes enable
\$7.7 trillion in card payments annually

Mainframes run
68 Percent of the world's
production workloads

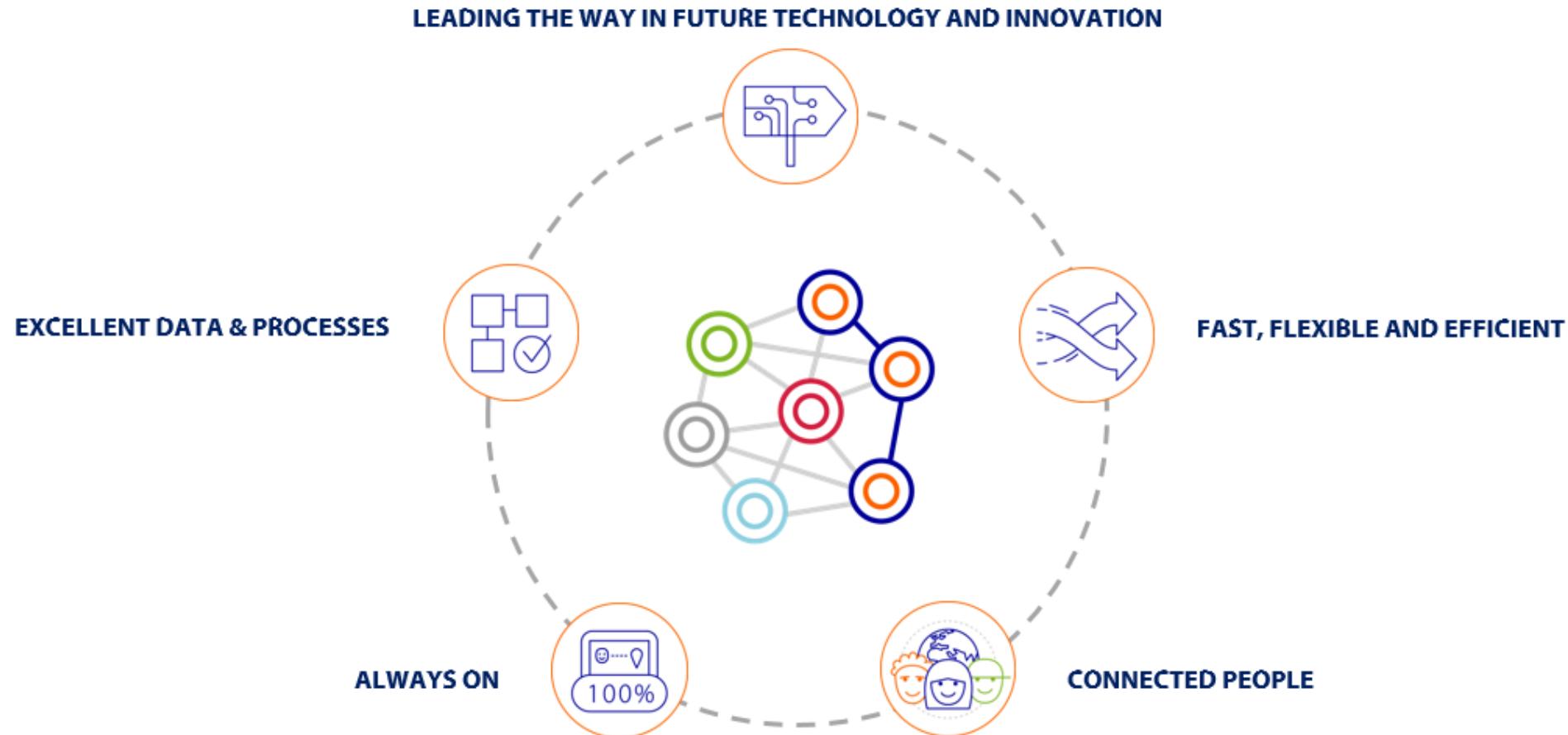


Building Tomorrow's Bank Today



We envision a bank moving from our current model with our own products to an open bank model, offering Rabo and non-Rabo products and services, in increasing partnerships with third parties. Fully organized around our daily customer needs.

Driven by digital technology, open banking will further transform to digital platforms where Rabobank and its partners will be connected. This will result in new, exciting cross-industry business models.



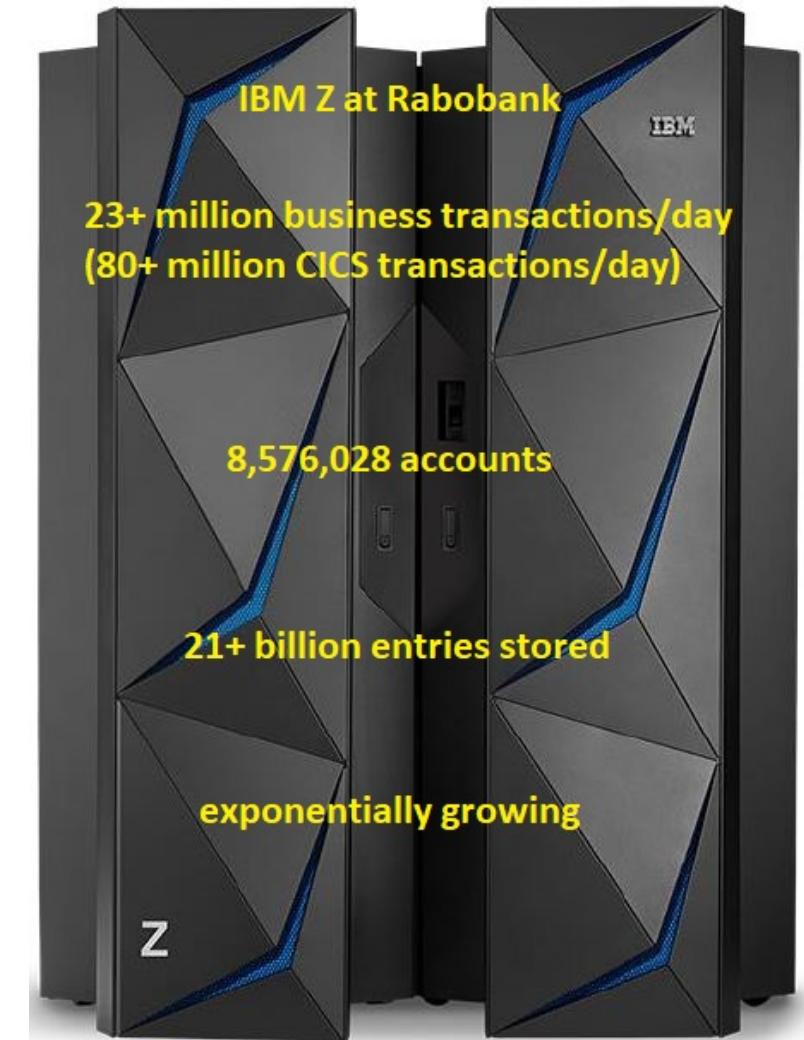
The Mainframe Has a Vital Role for Rabobank

The IBM Z platform is strategic for Rabobank

Rabobank is deeply committed to IBM Z

Ambition on IBM Z platform:

- ▶ Solid as a Rock
- ▶ Competitive in terms of costs and short time to market
- ▶ Transparent and open
- ▶ Automate everything



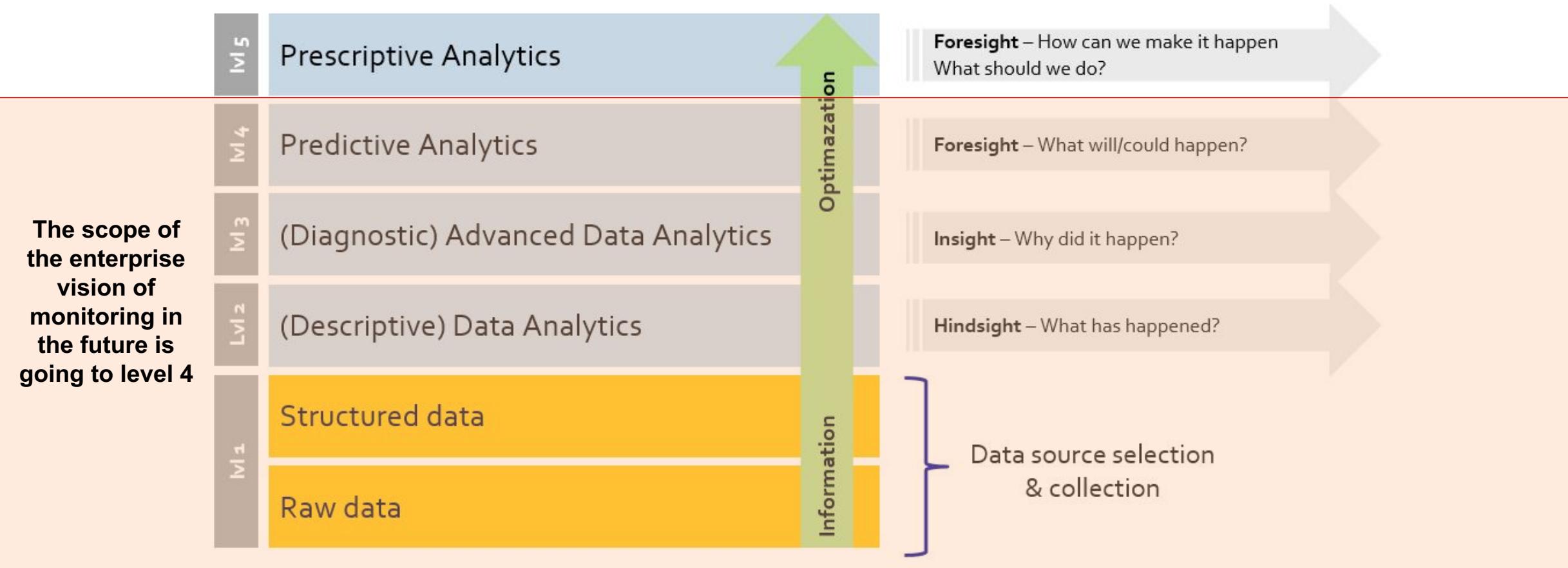
Enterprise Vision Monitoring in the Future

Rabobank wants to spot and plug any hole in the plumbing before the damage is done

- ▶ Rabobank wants to deliver reliable, transparent and predictable payments processing for their customers.
- ▶ It's all about detecting and resolving abnormalities before the customer notices it

Steps Towards the Vision

Growth to maturity level Predictive Analytics – From reactive to proactive and predictive



To ensure a 7x24 undisturbed banking for our customers the Rabobank must be able to predict disruptions, identify and fix them before the customer noticing.

Challenges

To achieve this, data from the processes and the environments is needed and the ability to process this data to information to be able to manage the entire chain of various business processes



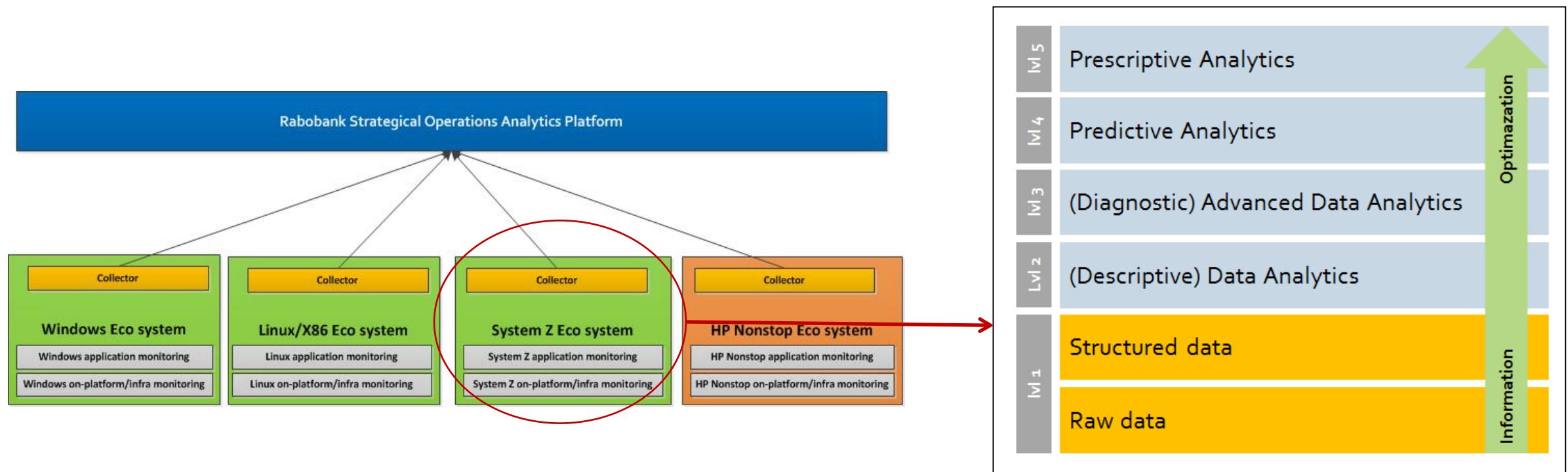
This functionality must be achieved:

- With NO negative impact on the performance and throughput of the core business systems
- In a non-invasive manner as much as possible, meaning that the need to change or recompile an application must be avoided
- With no or minimal overhead in the overall resource consumption of the system

Think Big, Start Small

Question

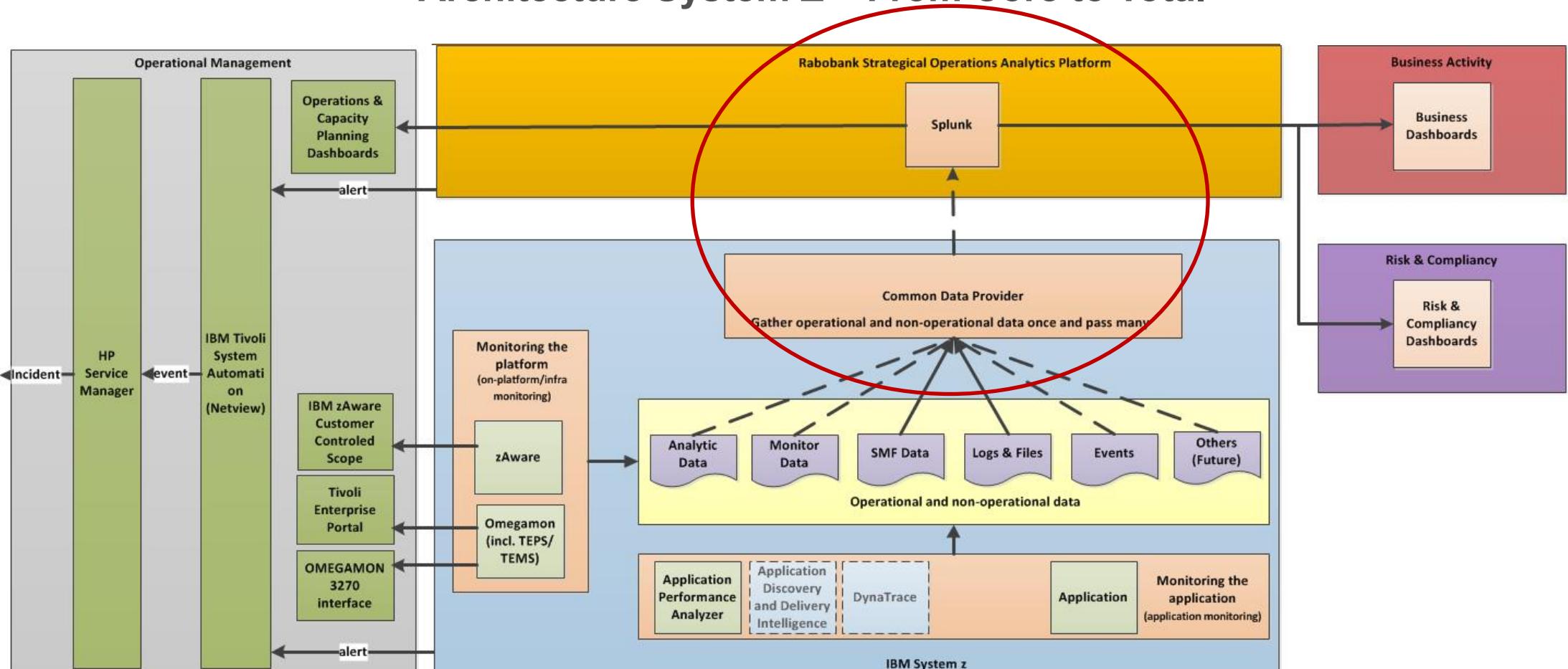
How can we improve the robustness and efficiency of the new Payment Factory currently build on IBM Z, by making small steps in deploying monitoring, within the boundaries of the Enterprise vision Monitoring?



Do not lose sight of the other environments during the making of these steps. In the end an end-to-end solution must be realized.

Think Big, Start Small

Architecture System Z – From Core to Total



Connecting to current
incident/operational management

Further improve
infra
monitoring

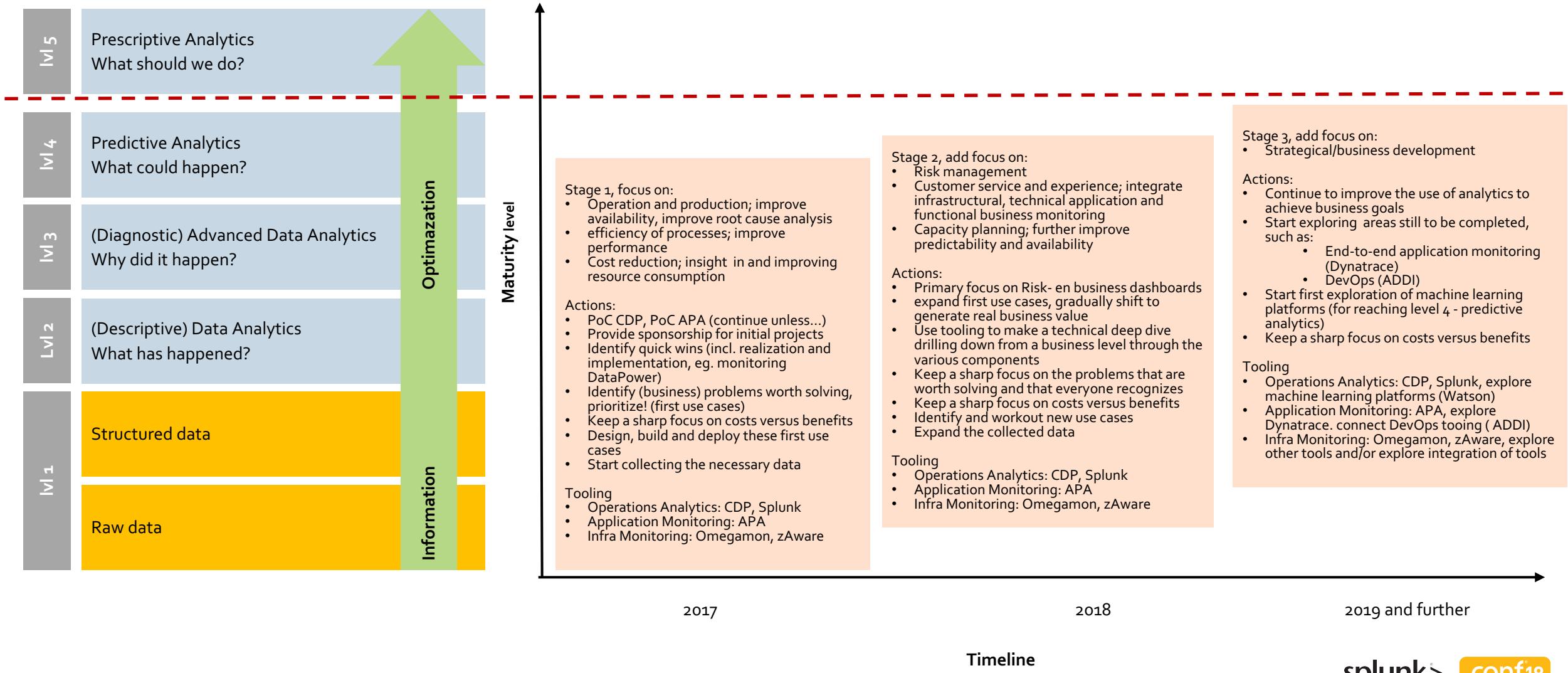
Further improve
application
monitoring

Connecting to Operations
Analytics Platform

Connecting to business needs
& Risk and Compliance

Think Big, Start Small

High-Level Roadmap Z



IBM and Splunk Partnership for Z Data

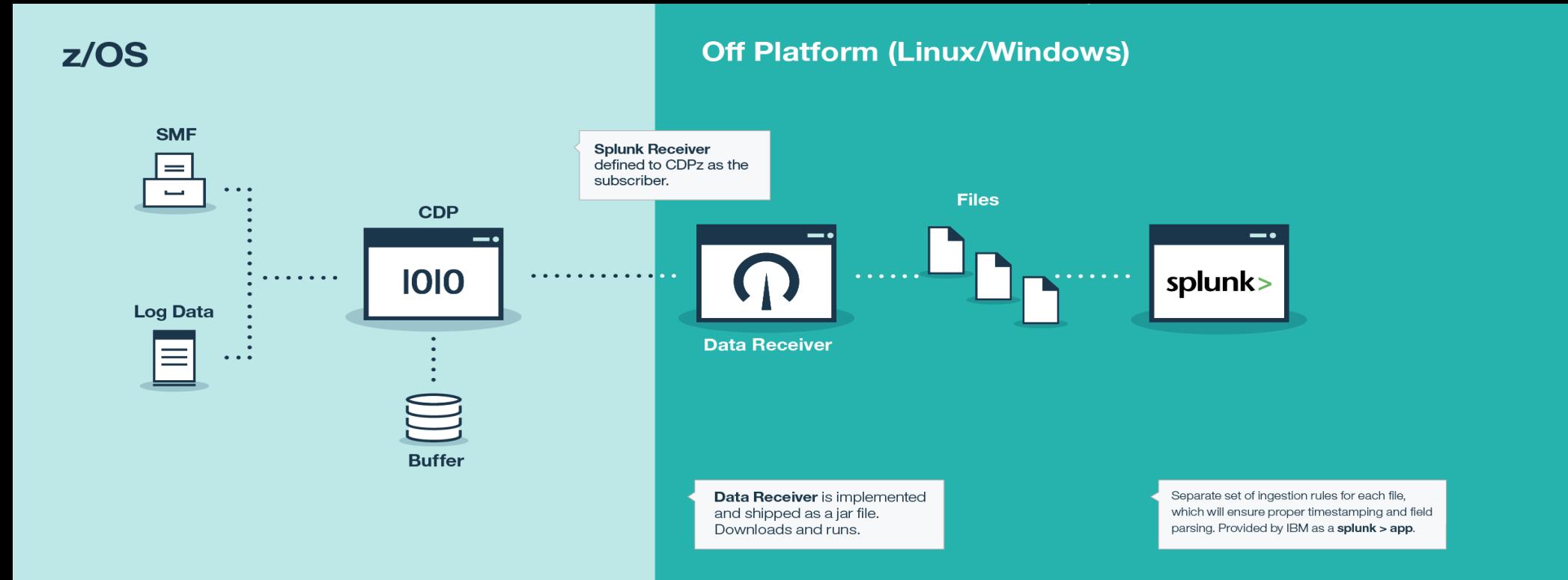
With IBM Common Data Provider for z Systems (CDPz) and Splunk clients can:



- ▶ Stream the *widest range of SMF records and Z log data in “near real-time”*
- ▶ Gain insight and eliminate blind spots in hybrid IT Operations
- ▶ Visualize impacts across your infrastructure from **continuously delivering** applications and application enhancements
- ▶ Maximize Splunk Investment with *advanced filtering*
- ▶ Save money with the CDPz’s **fixed pricing model** and **two vendor solution**



Accessing IBM Z Data with IBM Common Data Provider

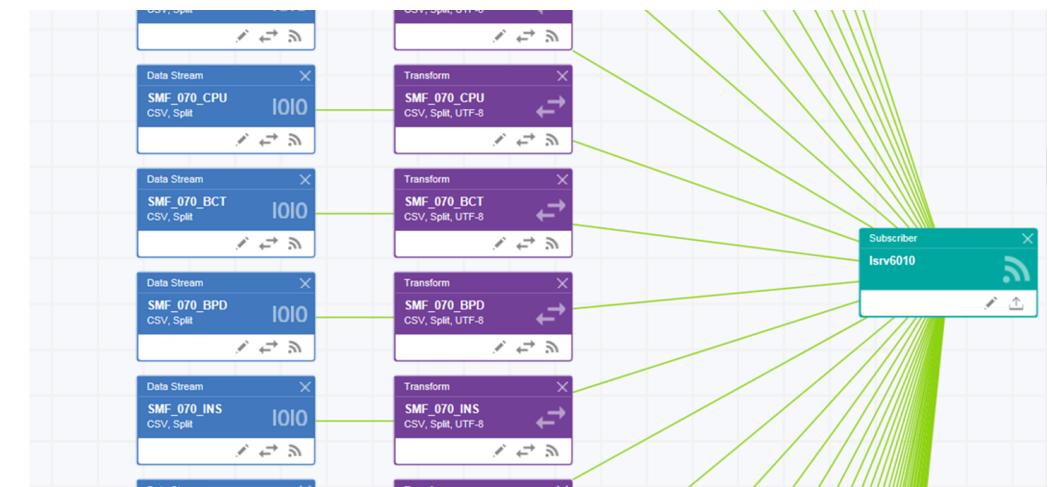
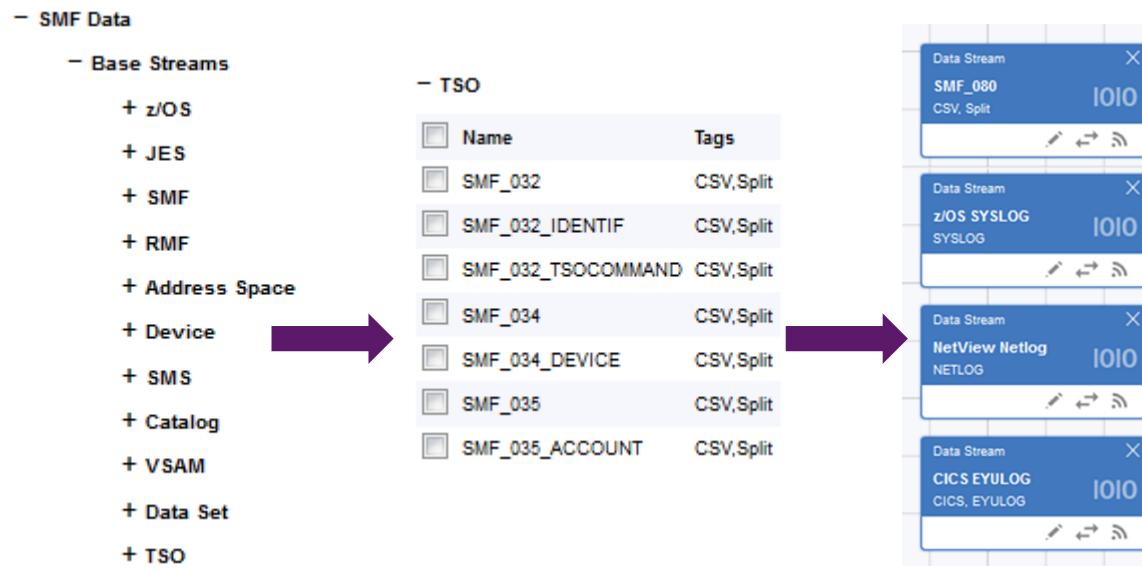


CDPz Leverages Simple Configuration

CDPz leverages z/OSMF to provide users a simple to use graphical interface to select, filter, and send data to the required target(s)



Just select the IBM Z SMF or Log data you need... Then add your date filters, target(s) and go!



Rabobank Splunk Environment (2017)

Data-driven service monitoring and analytics



>1300

4500+

hosts

100000

searches

200

source types

220

KPI's

8

connected
tools

1.6
TB

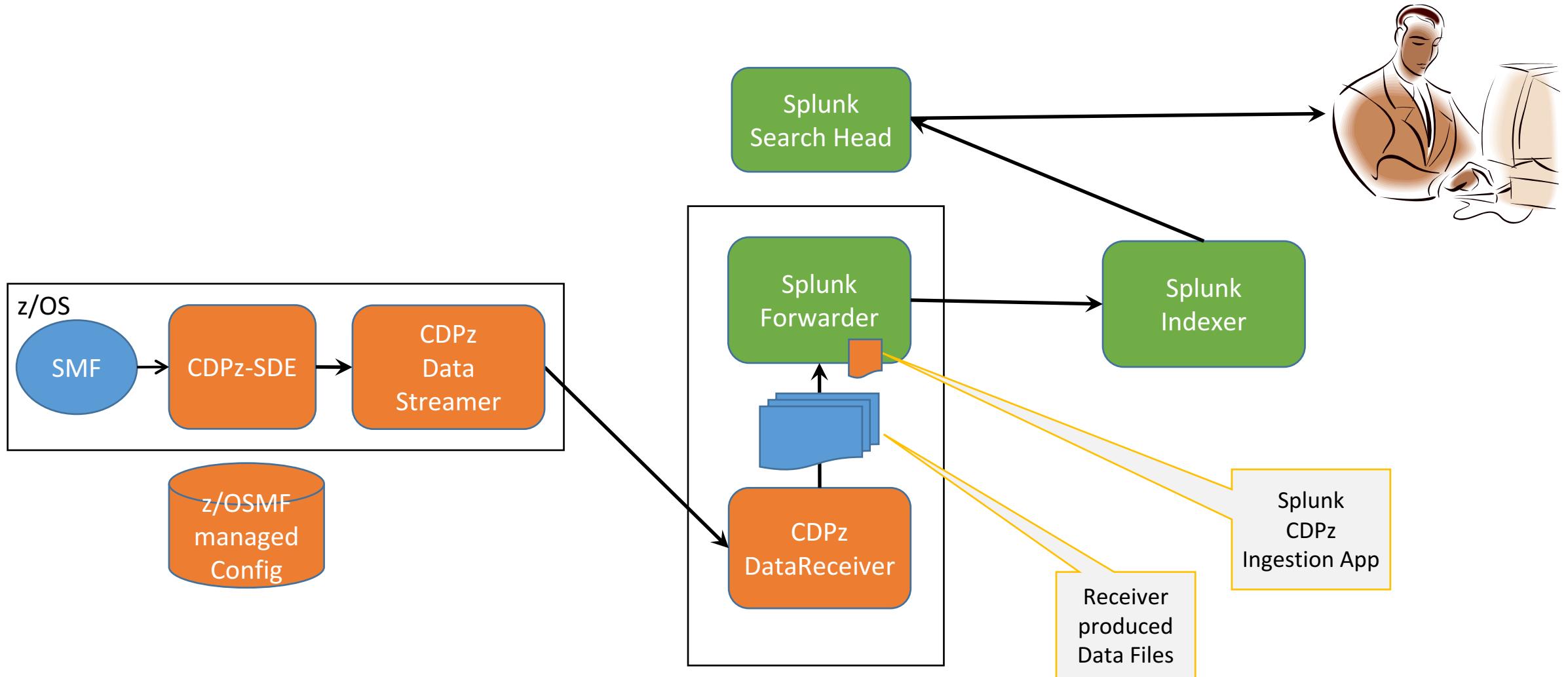
data

SPLUNK IT SERVICE INTELLIGENCE

splunk®

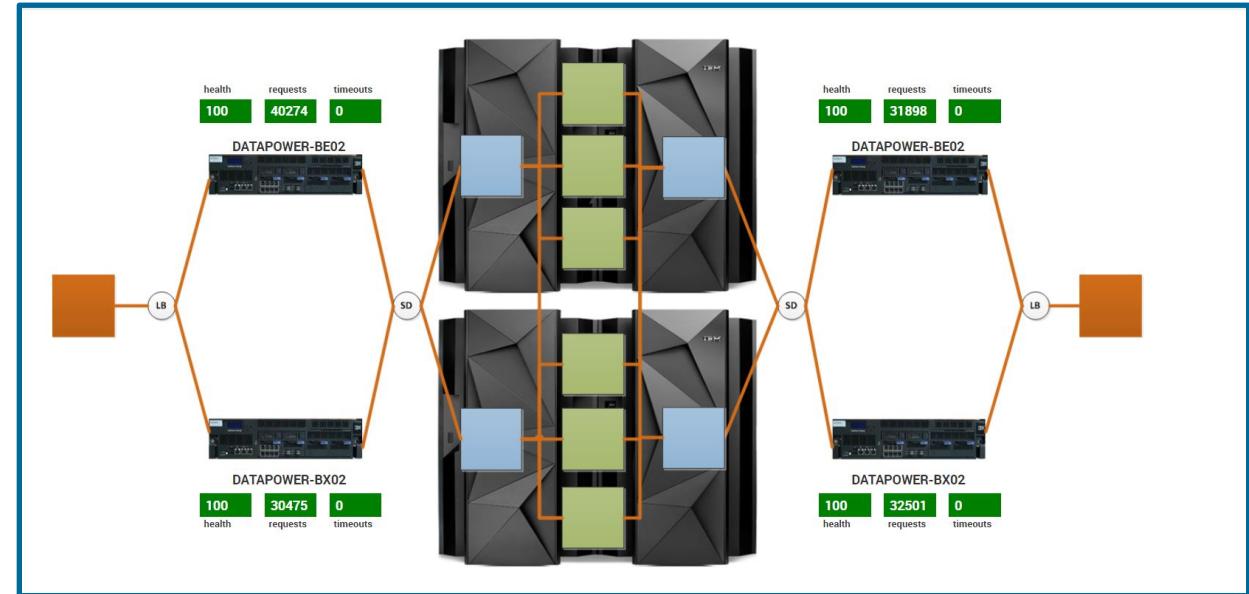
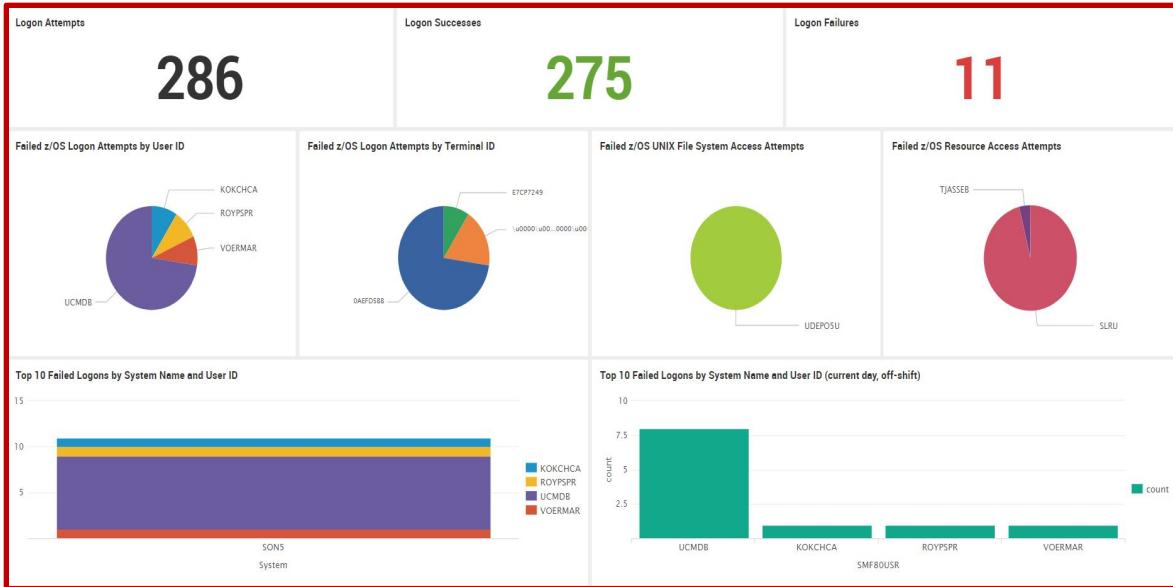
PLATFORM FOR MACHINE DATA

Rabo CDP – Splunk Setup



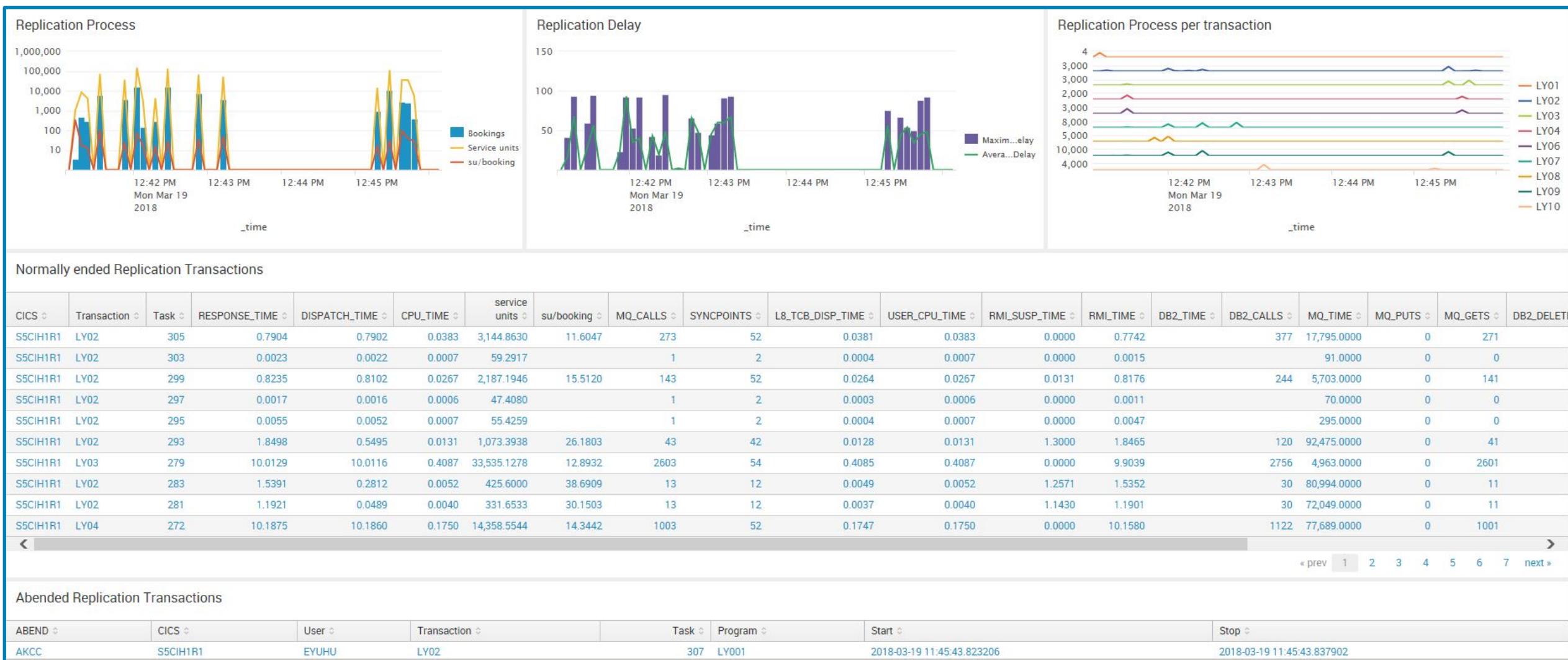
Infrastructure View

With CDPz/Splunk we can now visualize our IBM Z infrastructure



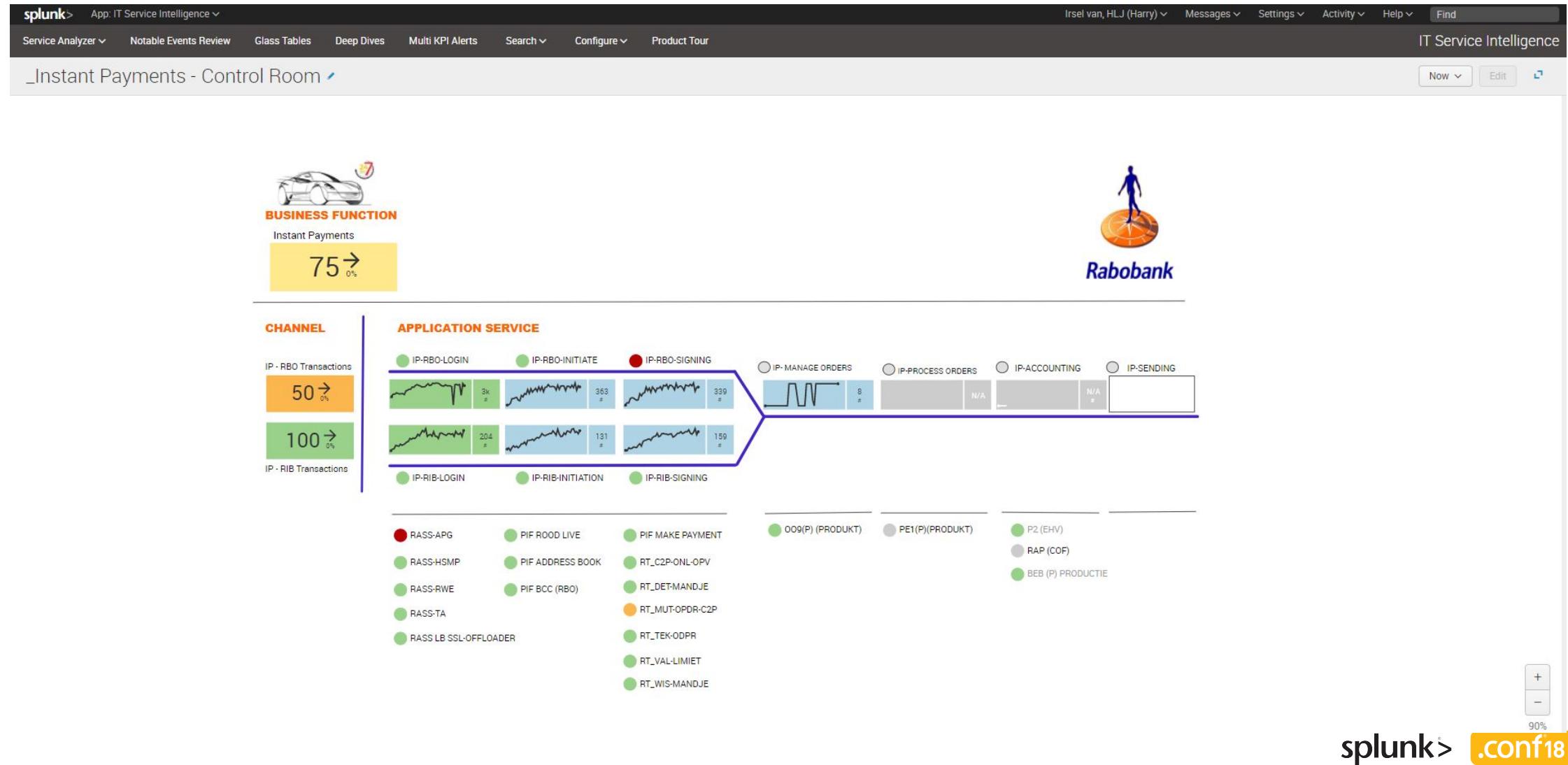
Application View

With CDPz/Splunk we can now visualize our IBM Z applications



Business Function View – Instant Payments

How Rabobank Gains Visibility Into Instant Payments



Key Takeaways

Using CDPz to bring Z data to Splunk

1. Prior to bringing Z data to Splunk we were never been able to get a complete understanding of the end-to-end environment
2. Typically, we then ended up in a situation where everybody blamed the other one. Or nobody realizes that what seems a small issue disrupts a complete core business process
3. IBM Common Data Provider for z Systems (CDPz) allows us to stream (in real time) IBM Z data to Splunk
4. By bringing IBM Z data in Splunk along with data from the distributed environments we now are able to get a complete understanding of the end-to-end environment
5. Through this we are able to immediately act on these analytic insights, which helps us to be able to guarantee continuity for our customers
6. As next step we want to automate this process more and more by starting to predict the near future based on historical data/patterns and by using Artificial Intelligence

What's Next

- ▶ Extend use of Splunk IT Service Intelligence for end-to-end-monitoring of our core business functions
- ▶ Extend the use of CDPz/Splunk (more use cases/more data sources) to:
 - Further improve availability, performance, efficiency
 - Further reduce costs
- ▶ Start improving predictability for a better capacity planning
 - Machine Learning for reaching level 4 – predictive analytics
- ▶ Integrate different tracks infrastructural, application and business monitoring

For More Information

IBM Common Data Provider for Z Systems web site

<http://ibm.biz/CDPzInfo>

IBM Common Data Provider 1.1 Knowledge Center

https://www.ibm.com/support/knowledgecenter/SSGE3R_1.1.0/com.ibm.cdpz.doc/welcome.html

Contains links to program directories (SMP/E installation) and Users Guide

IBM Common Data Provider on DeveloperWorks

<http://ibm.biz/CDPzWiki>

FAQs, documentations, service information

White Paper on integrating CDPz with Splunk

<https://www.ibm.com/support/techdocs/atsmastr.nsf/WebIndex/WP102713>

CDPz Sample Dashboard for Splunk on SplunkBase

<http://ibm.biz/CDPzSamples>

IBM Z IT Service Management Newsletter

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“Quality means doing it right
when no one is looking”

Henry Ford

Thank You

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