

# SAS<sup>®</sup> Forum Stockholm 2014

make connections • share ideas • be inspired

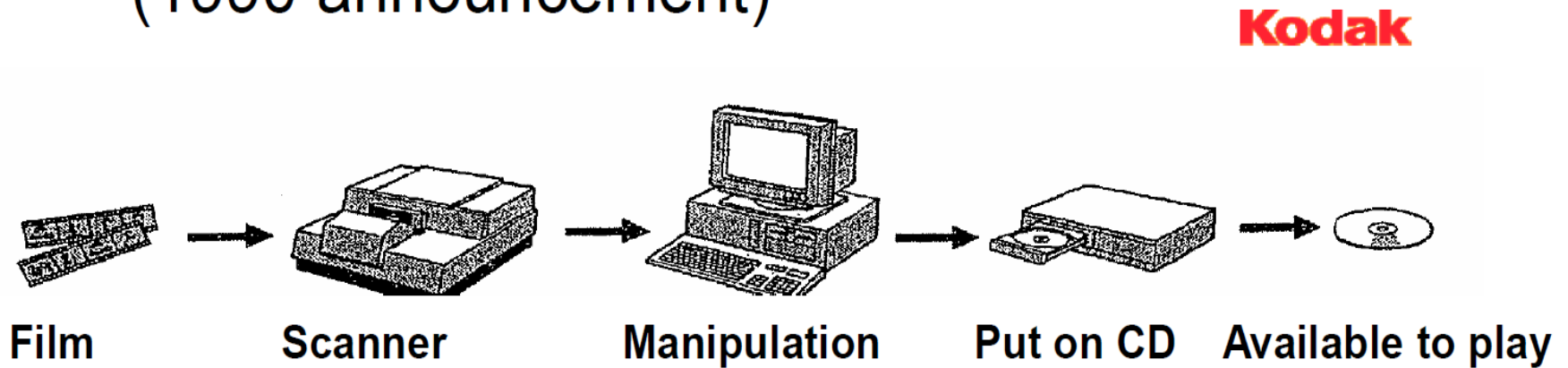
## SAS Analytical Platform - technology direction and some modernization options

Henrik Slettene  
Head of Nordic Center of Excellence, Enterprise Analytics



# Modernization?

(1990 announcement)







Source: Kodak's Hybrid *New York Times* October 7, 1990



# Digitalization

Digital opportunities as competitive edge - and threat

"My business and its IT organization are being engulfed by a torrent of digital opportunities. We cannot respond in a timely fashion, and this threatens the success of the business and the credibility of the IT organization."

EMEA	52%
	43%
	53%
	60%
	33%

51%  
Agree



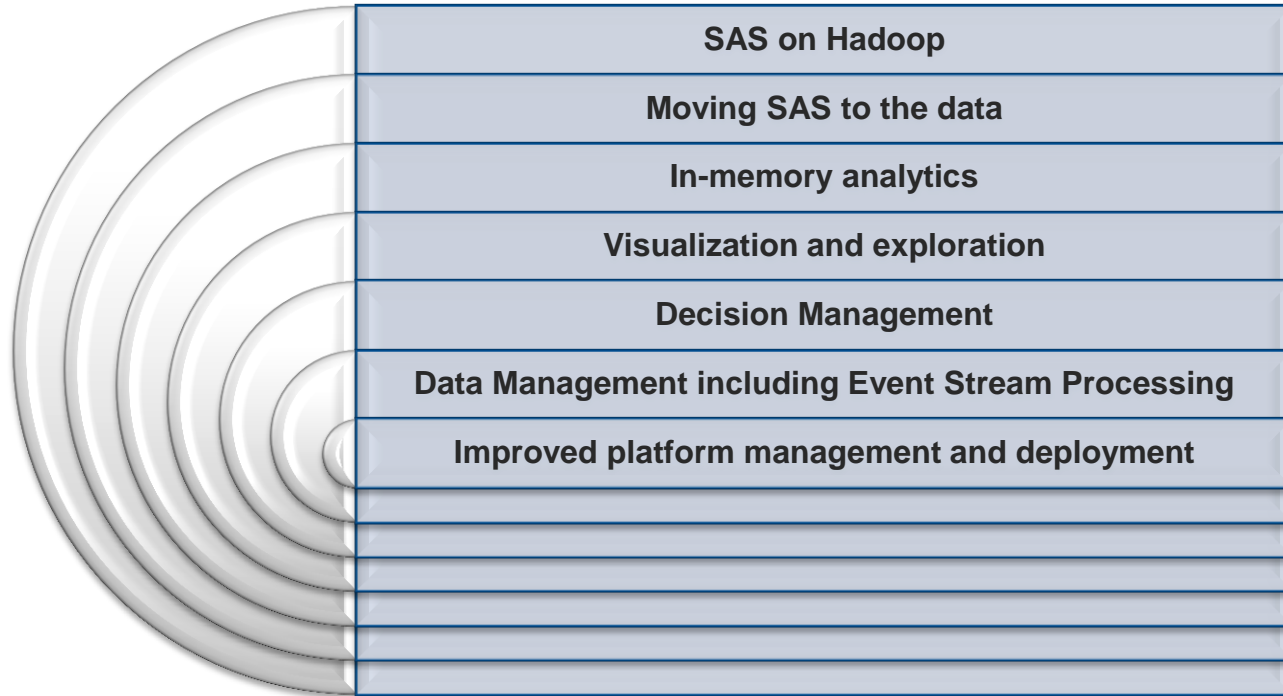
"The IT organization has the right skills and capabilities in place to meet upcoming challenges."

Gartner Group: CIO Survey, 2013



# SAS technology directions

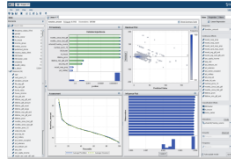
*What is «modern sas»?*



# I have SAS... What are possible next steps?



**High Performance Analytics**



**Visual Statistics on top of VA**



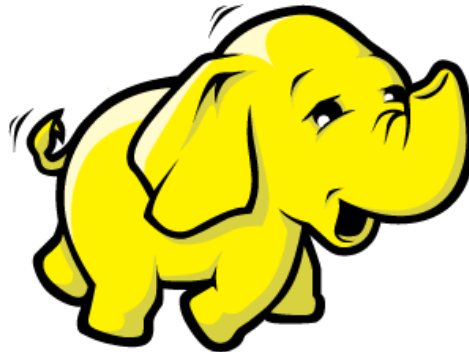
**SAS on SAP HANA**



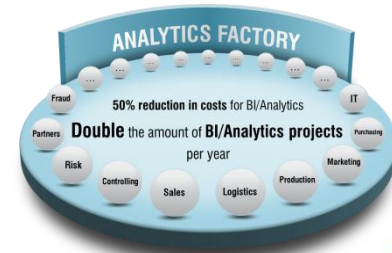
**Decision Management**



**Data Management**



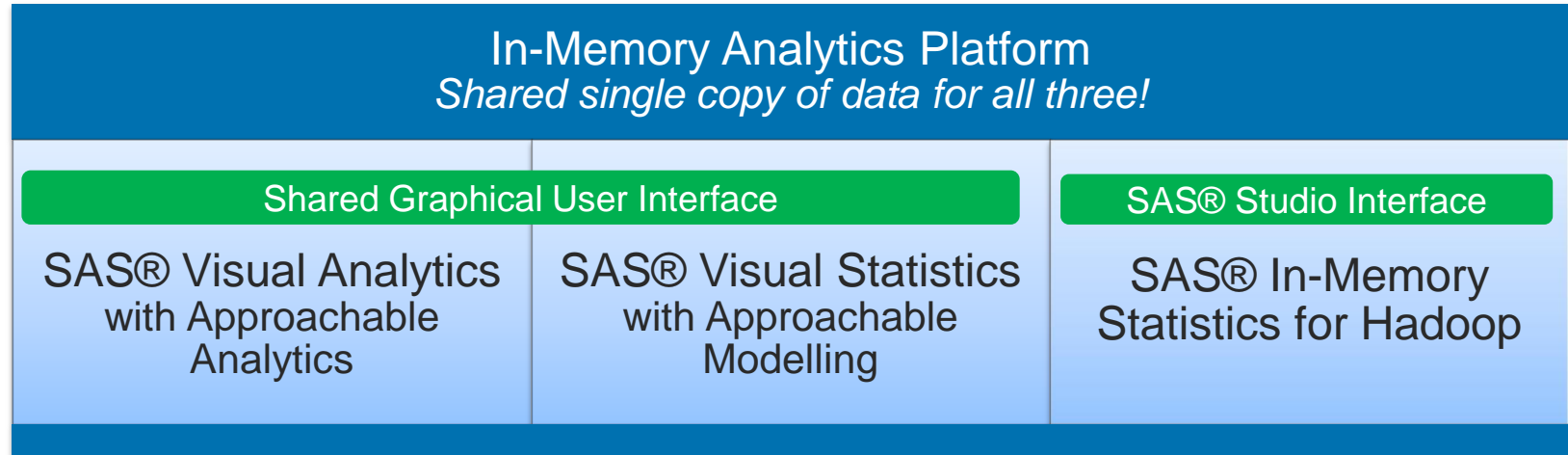
**SAS on Hadoop**



**Analytics Factory**



# In-Memory Analytics based on LASR Server



Open to the masses

**No** statistics skills required

**No** programming knowledge required

Focus on **consuming** analytics

Reduced number of users

**Some** Statistics skills required

**No** programming knowledge required

Focus on **producing** analytics

Lower number of users

Statistics skills **required**

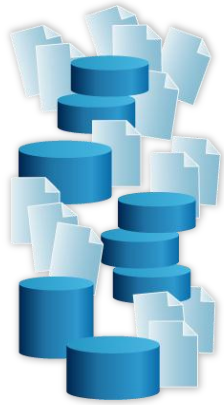
Programming knowledge **required**

Focus on **producing** analytics



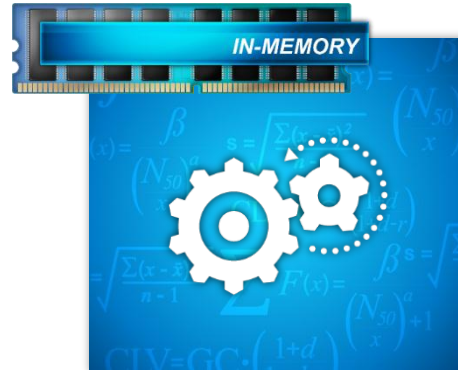
# SAS and SAP

## Reduced Data Movement



Short data-to-compute distance

## Massive Performance Boost



In-memory parallel processing for analytic workloads.

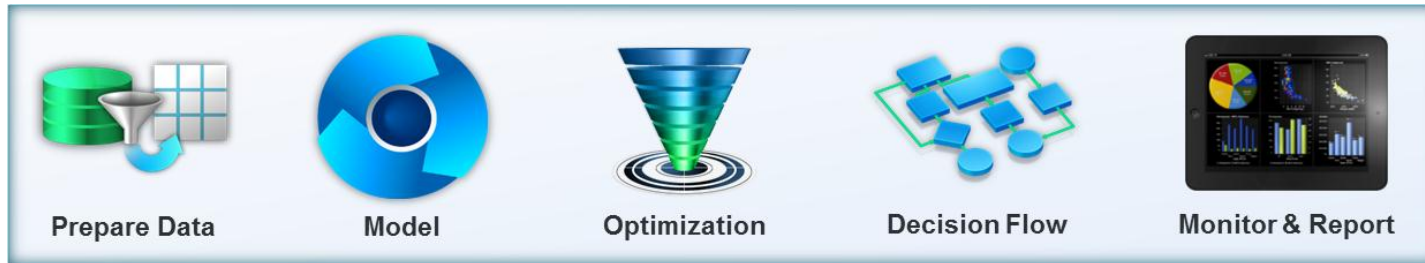
## Simplified IT Landscape



Analytical and Transactional processing on a single data store.



# SAS Decision Manager



**SAS® Decision Manager** (Project-based Collaboration, Governance)



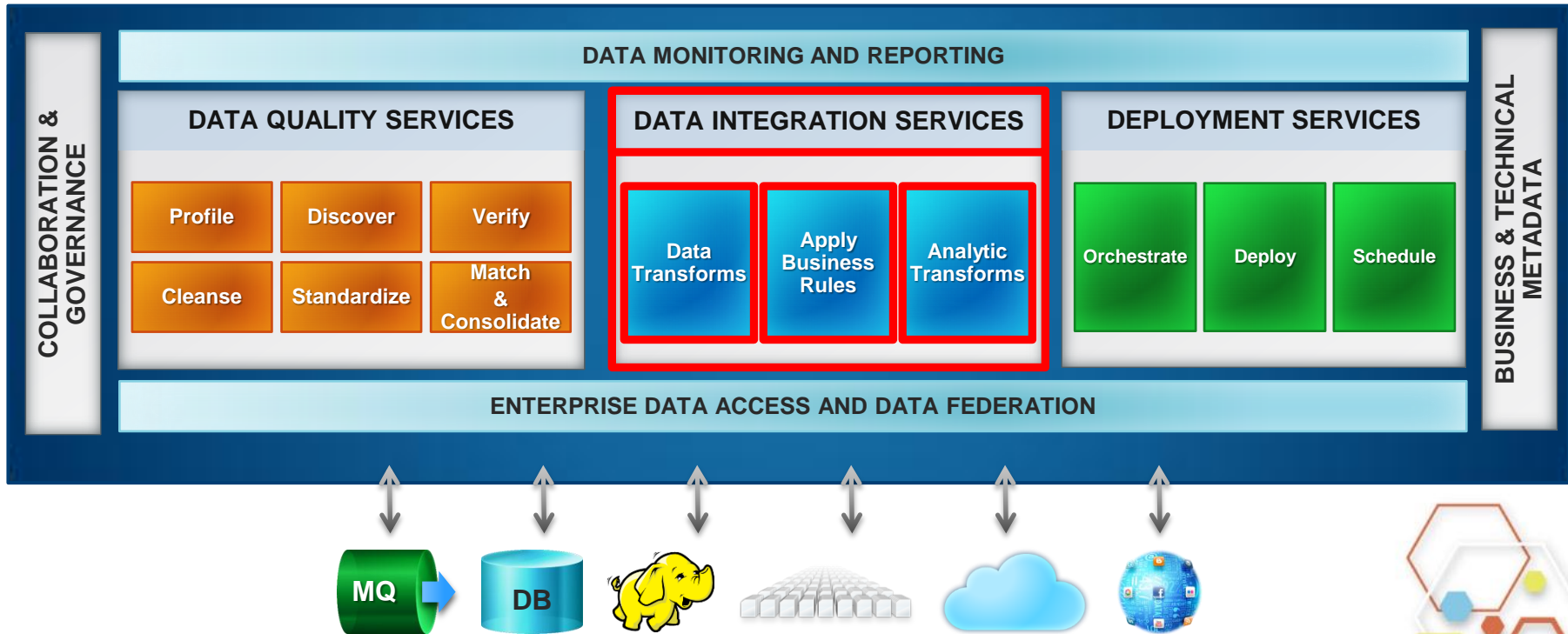
Shared  
Platform  
Components





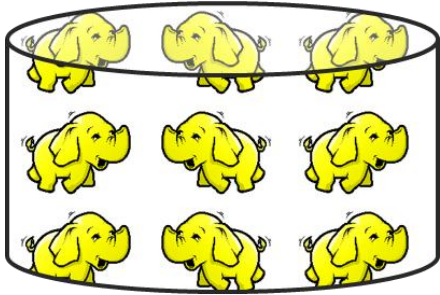
# SAS Data Management

*Unified Data Management architecture*

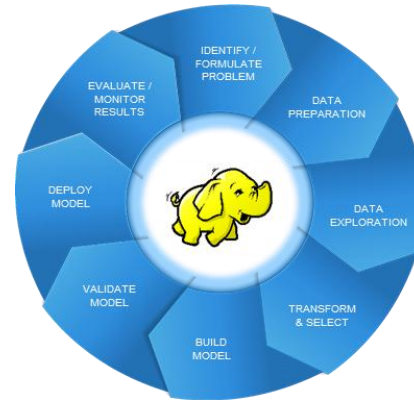


# Hadoop and SAS – two scenarios

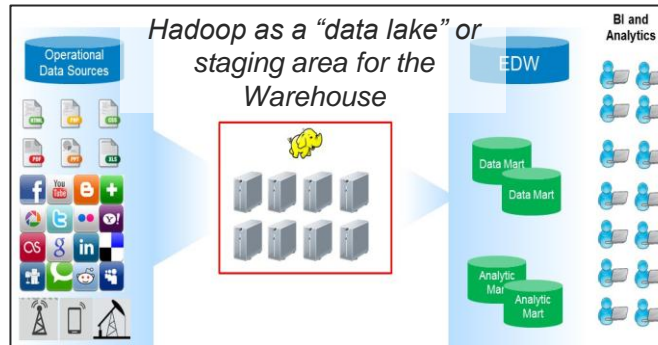
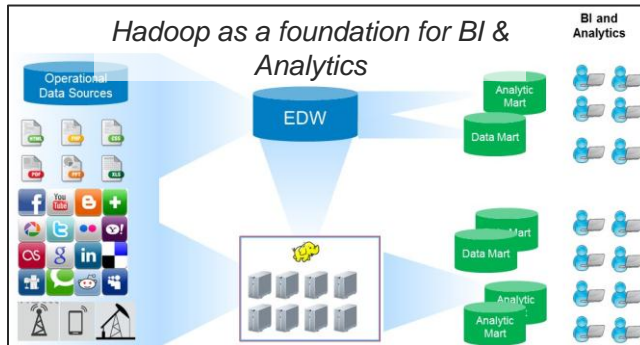
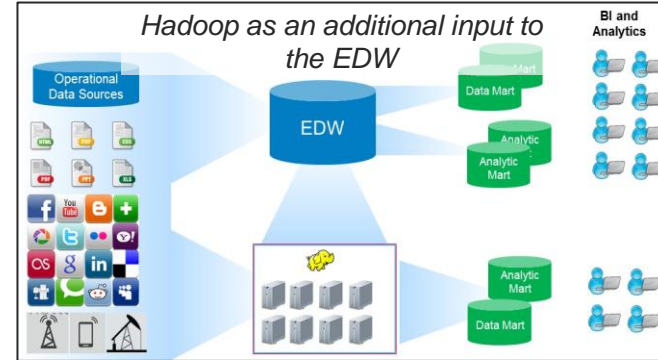
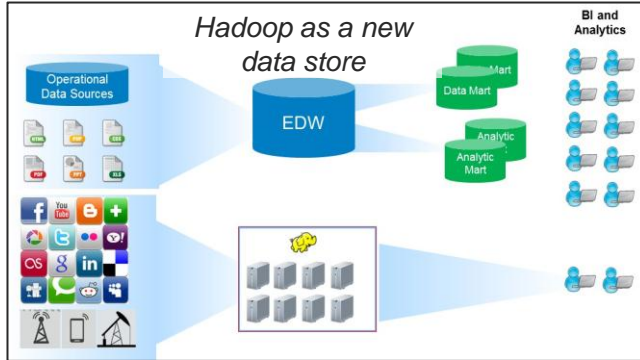
Hadoop as a Data Platform  
(standalone or as part of a broader ecosystem)



Hadoop as a core component of the next generation of  
BI and Analytics



# Hadoop as a data platform



# SAS on Hadoop

Today...

## BASE SAS

- Map Reduce + Pig Scripting + HDFS Commands

## SAS/Access to Hadoop

- Hive, Hive2 + Direct file access

## SAS/Access to Impala (Cloudera only)

## SAS Data Integration Studio (Transforms) in Data Management Standard / Advanced:



- Read/Write HDFS files
- Submit HiveQL code
- Execute Map/Reduce code
- Submit Pig Latin
- Transfer data to/from Hadoop using Hadoop utilities
- SQL transforms pushed down with Access to Hadoop engine

## SAS Federation Server

Virtual and secure access to Hadoop and more traditional sources

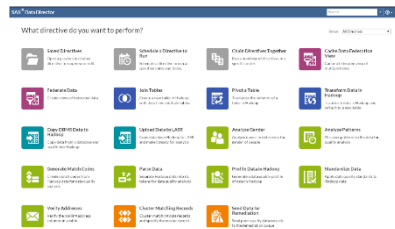
## SAS Event Stream Processing Engine

To bring streaming data from Sensors into Hadoop

Coming very soon...

## SAS Data Loader for Hadoop

- SAS Data Loader
  - HTML 5 GUI to drive Execution
- SAS Data Quality Accelerator for Hadoop
  - Execute selected DQ routines in Hadoop
- SAS Code Accelerator for Hadoop
  - Execute SAS DS2 code in Hadoop



Point and click data management routines where data stays in Hadoop



# Hadoop in the analytics lifecycle

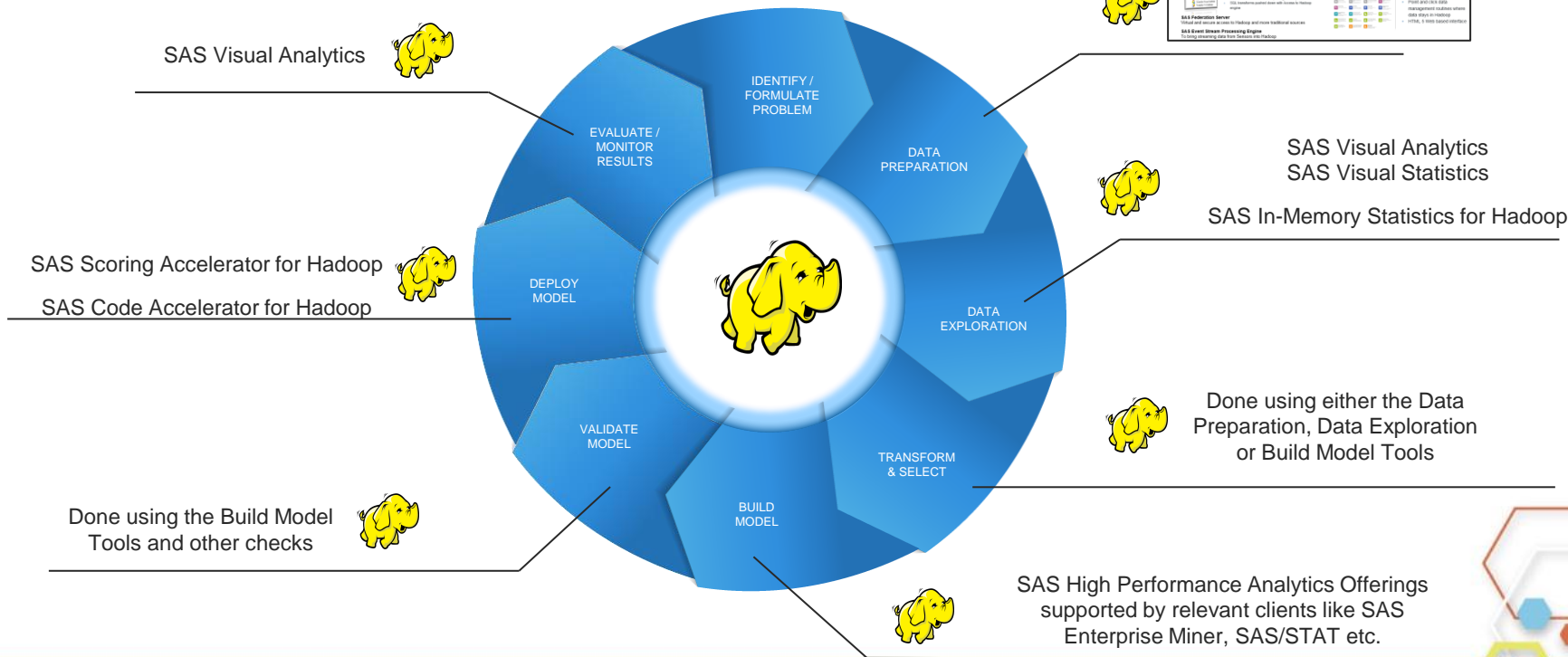
**HIGH LEVEL VIEW** WHAT YOU CAN DO WITH SAS AND HADOOP WHEN IT COMES TO USING "HADOOP AS A DATA PLATFORM"

**Today...**

- SAS SAS
- SAS Access to Hadoop
- SAS Data Quality Accelerator for Hadoop
- SAS Data Integration Hub (Transformed) in Data Management
- SAS Code Accelerator for Hadoop
- SAS In-Memory Statistics for Hadoop
- SAS Enterprise Miner
- SAS Enterprise Decisioning
- SAS Enterprise Reporting
- SAS Enterprise Visual Analytics
- SAS Enterprise Visual Statistics
- SAS Enterprise Visual Statistics for Hadoop
- SAS Enterprise Visual Statistics for Hadoop (New Web Based Business User Interface)

**Coming in August**

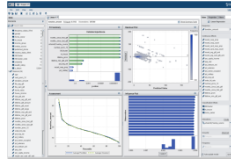
- Everything we have today plus...
- SAS Data Quality Accelerator for Hadoop
- SAS Code Accelerator for Hadoop
- SAS In-Memory Statistics for Hadoop
- SAS Enterprise Visual Analytics
- SAS Enterprise Visual Statistics
- SAS Enterprise Visual Statistics for Hadoop
- SAS Enterprise Visual Statistics for Hadoop (New Web Based Business User Interface)



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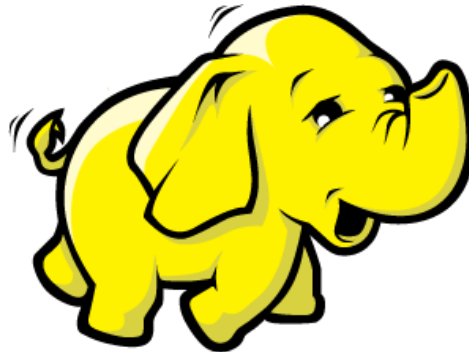
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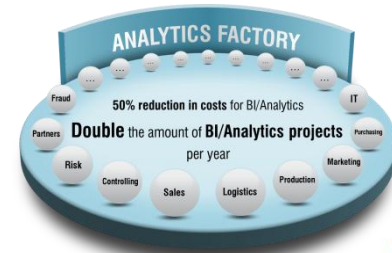
**Decision Management**



**Data Management**



**SAS on Hadoop**



**Analytics Factory**



# SAS<sup>®</sup> Forum Stockholm 2014

make connections • share ideas • be inspired

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