



ANALYTICS EXPERIENCE 2016

# Mass-Scale, Automated Machine Learning and Model Deployment Using SAS® Factory Miner and SAS® Decision Manager

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SAS13531

#analyticsx



# About the presenters



**Jonathan Wexler**, Principal Product Manager, SAS

Responsible for SAS Enterprise Miner, SAS Factory Miner and related SAS Machine Learning products. He has a B.S. in Mathematics/Statistics and M.A. in Biostatistics.



**Steve Sparano**, Principal Product Manager, SAS

Responsible for SAS Decision Manager, SAS Event Stream Processing, and SAS Workflow automation capabilities. He has a B.S. in Business Management and Computer Science.

# Agenda



Automate your model  
development



Streamline and action your  
analytics



SAS Software Demo

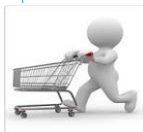
# Agenda



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SAS Software Demo

# Scalable Analytics

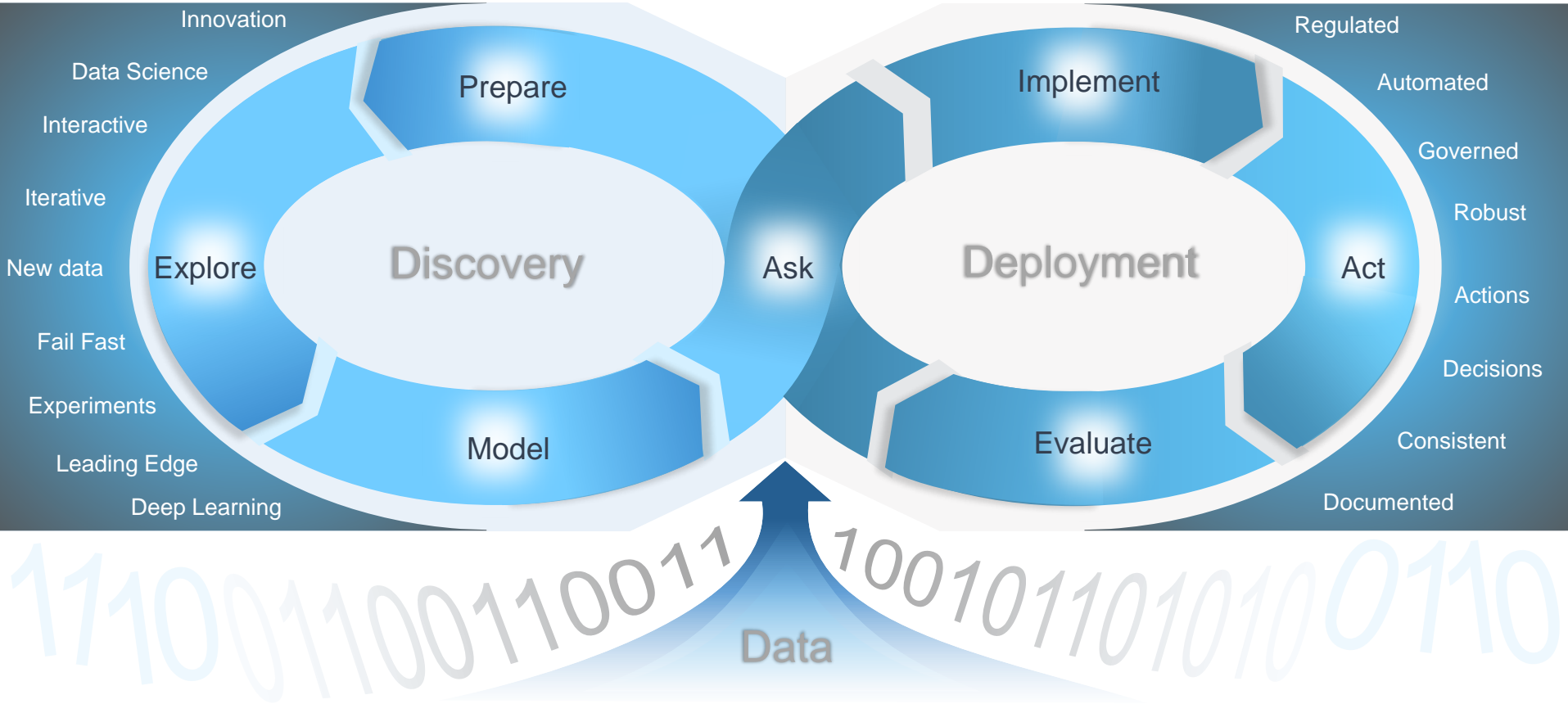
- **More Machine Learning Algorithms**
- **Model Tournaments**
- **More Granular Segments**



- **Embedded Analytics**
- **Combine Business Rules and Models**
- **Build Once, Deploy Anywhere**

- **Use ALL the Relevant Data**
- **Include More Attributes**

# Decisions at Scale



# Micro Segmentation

DATA

Summed customer transactions



Customer type



Community type



Distance



Spend frequency



*Increasing refinement / granularity*

Creating a **hierarchy** of models, choosing the “best” model at each level

# SAS<sup>®</sup> Factory Miner

Automated, white box  
modeling

1

Sharable best practice  
process templates

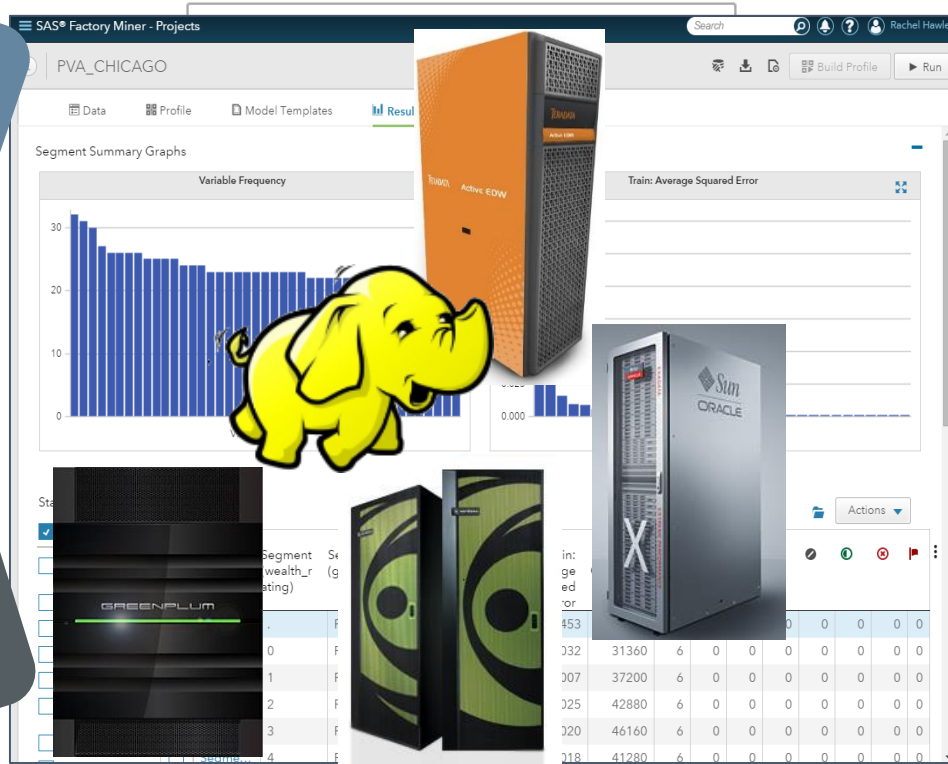
2

Modern machine  
learning algorithms

3

Industrial Scalable Analytics

4



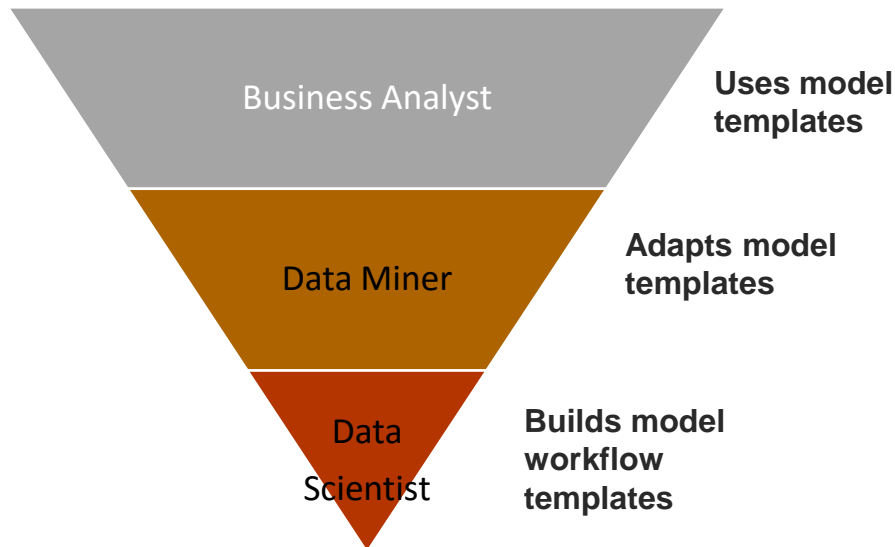


# Extend Organizational Talent Pool

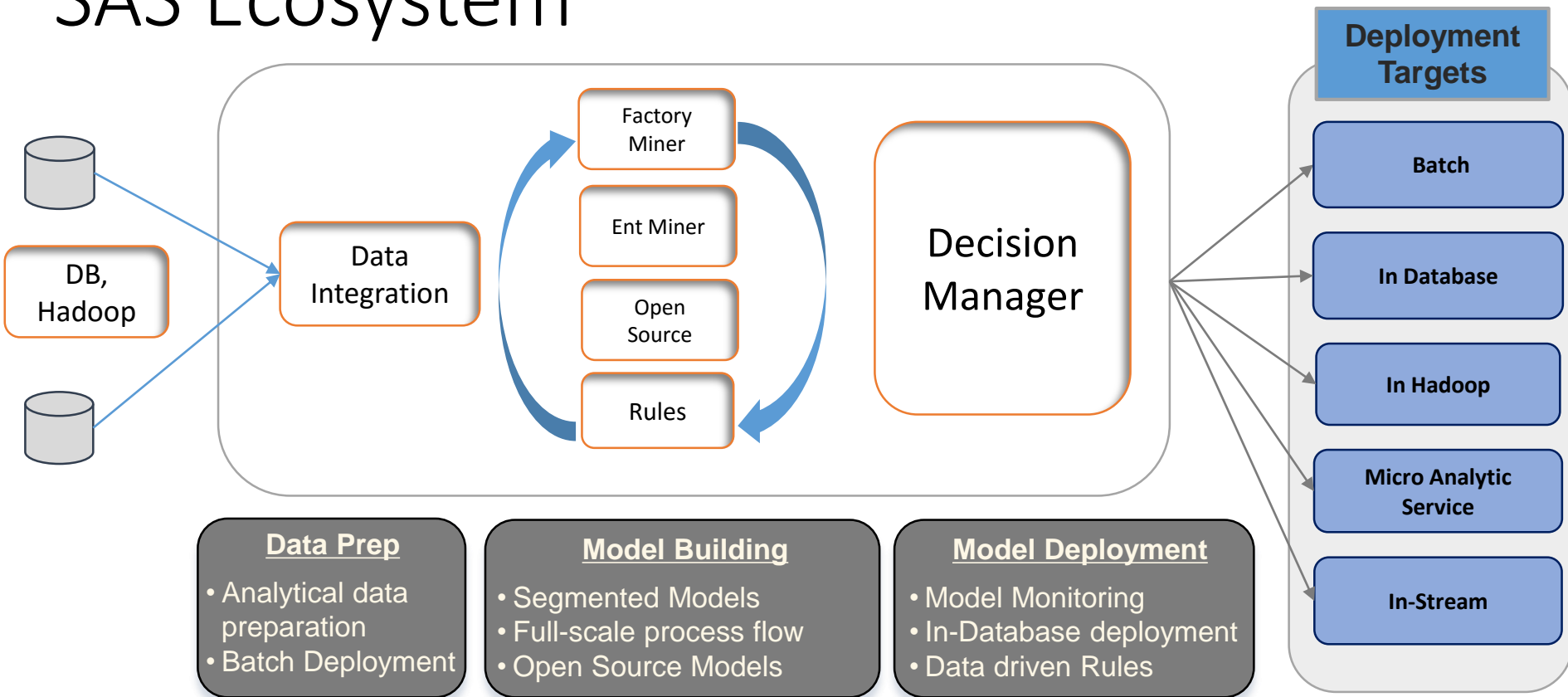
**Data Science Superhero**



## **Analytics Collaboration**



# SAS Ecosystem



# Agenda



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SAS Software Demo

# Decision Management

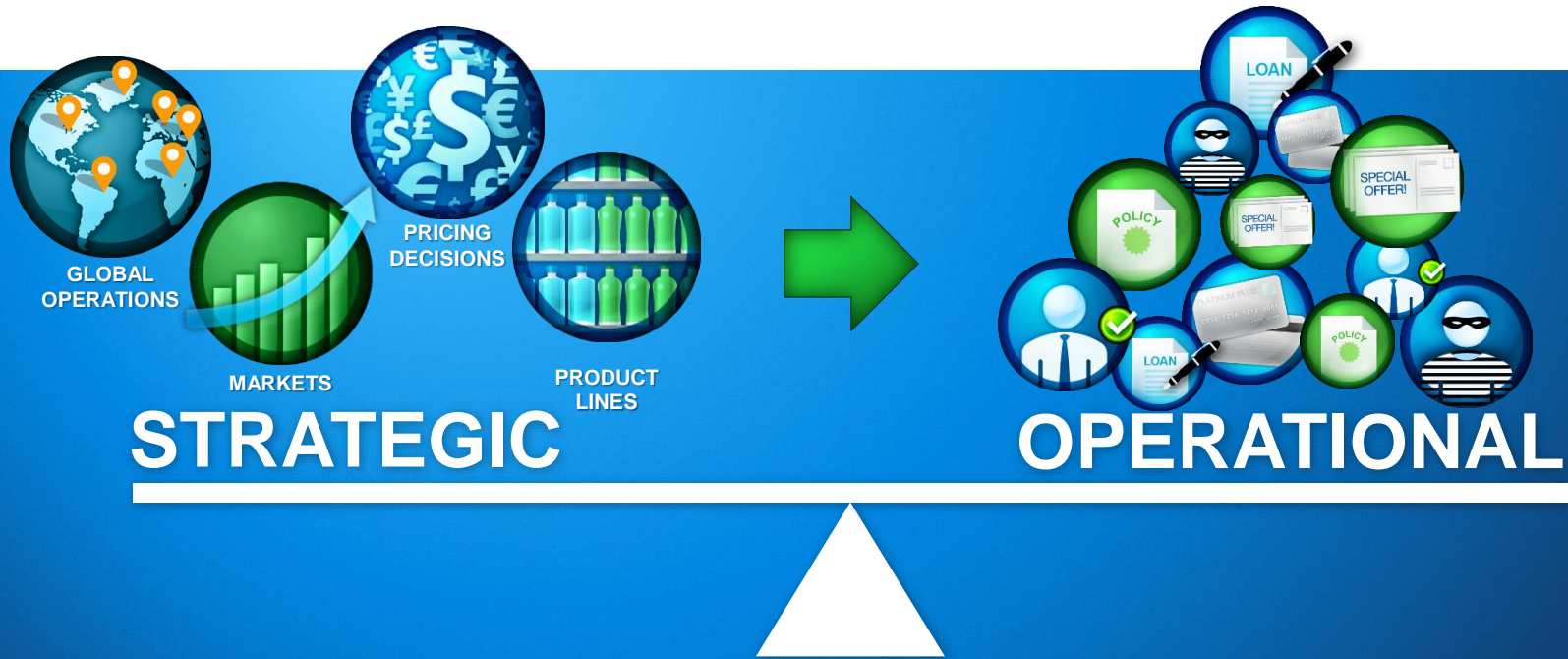
Decision Management is an approach for **automating** and **improving** high-volume operational decisions.



- ACCURATE
- SCALABLE
- GOVERNED

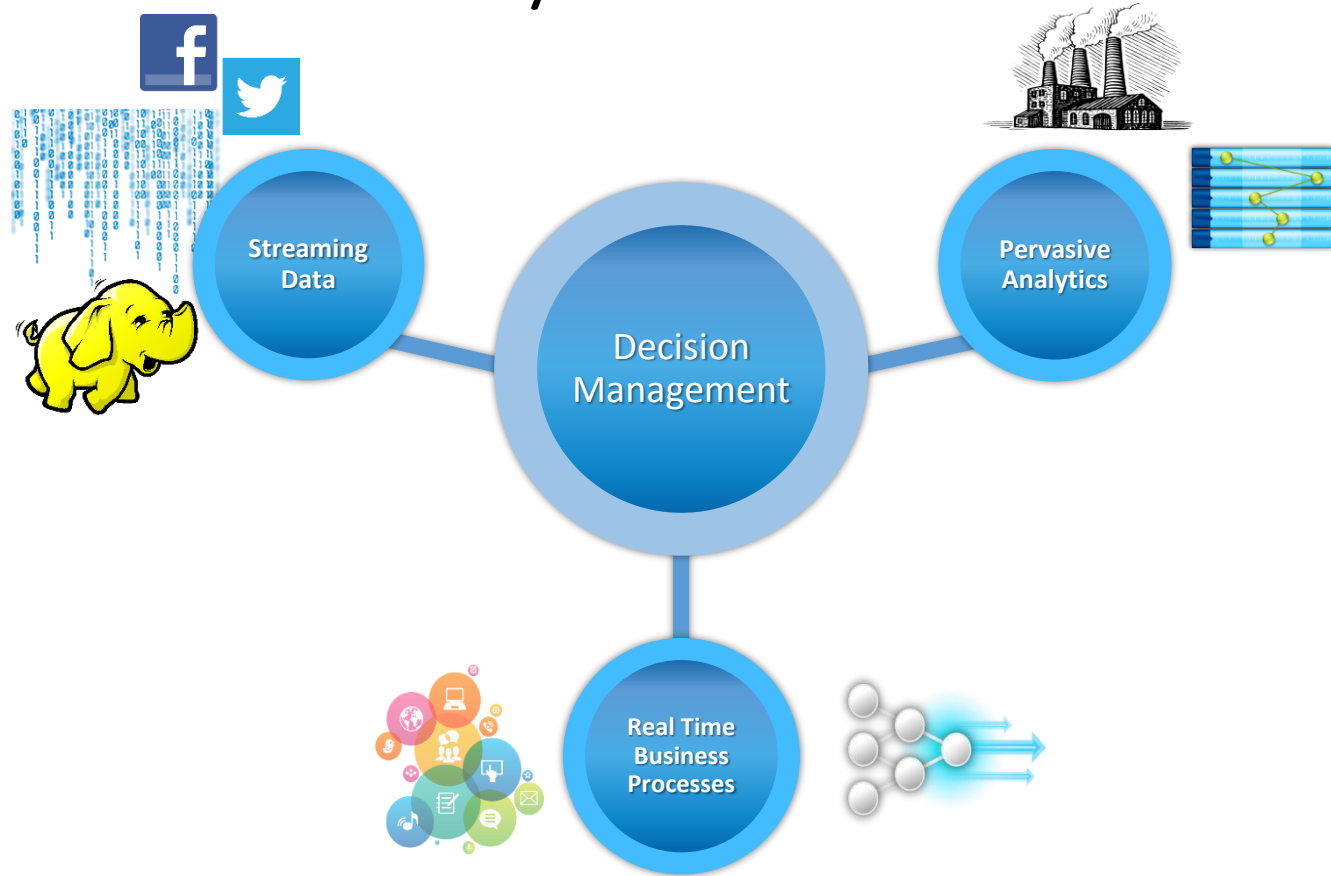
Decision: Data Prep + Business Rules + Analytical Models + Optimization + Integration

# Decisions



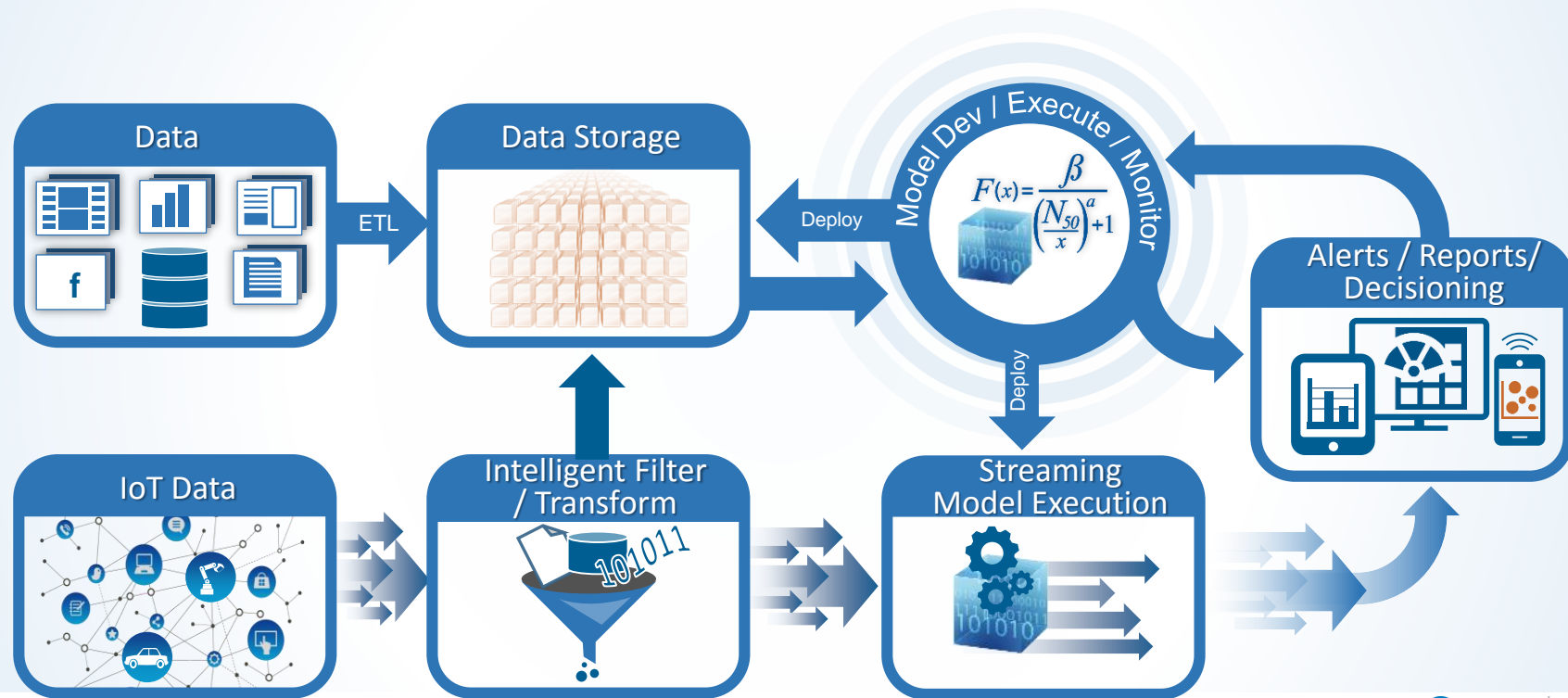
# Evolving Environment of Data-Analytics-Processes

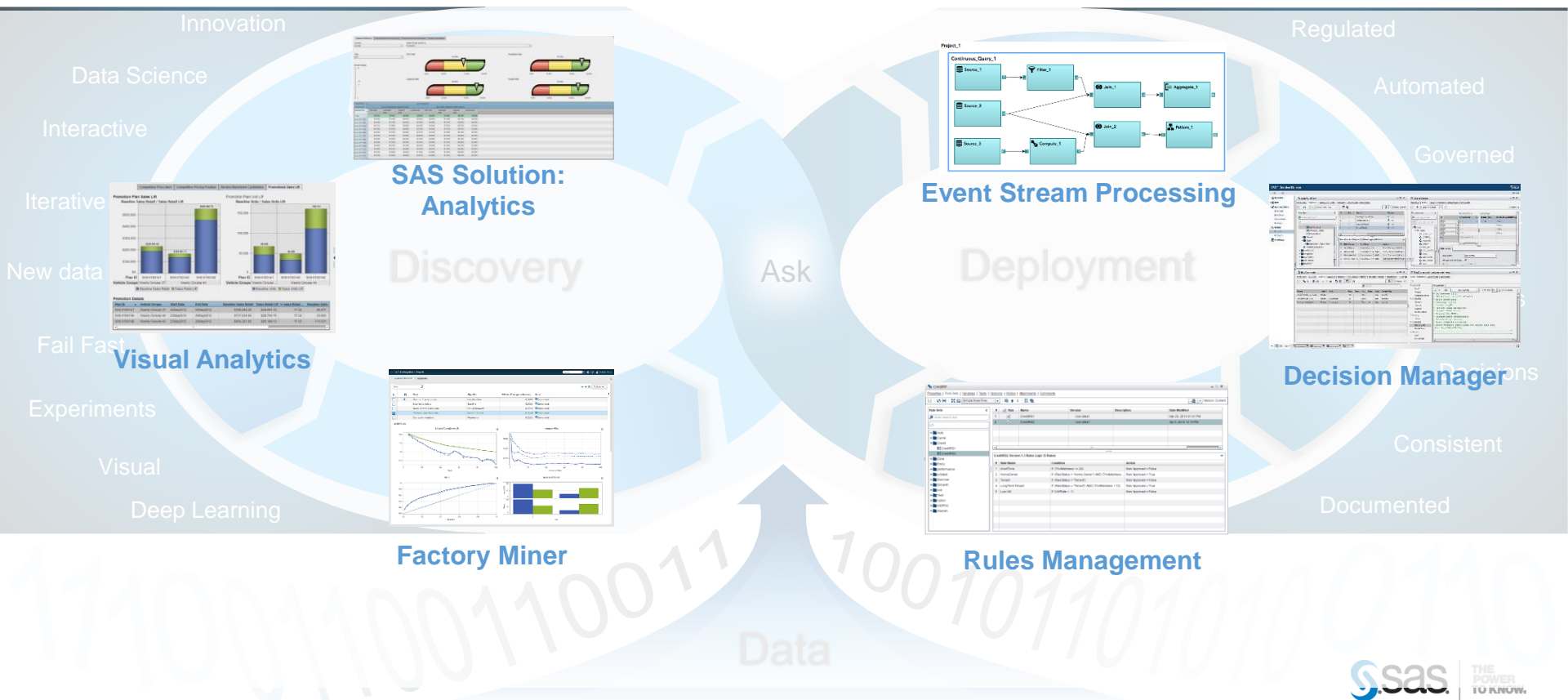
- Integration of Rules, Events, Models, Data
- Unified Decision Management platform
- Streamline decision deployment for multiple targets



# Internet of Things

## ANALYTICS LIFECYCLE: SENSE – UNDERSTAND - ACT

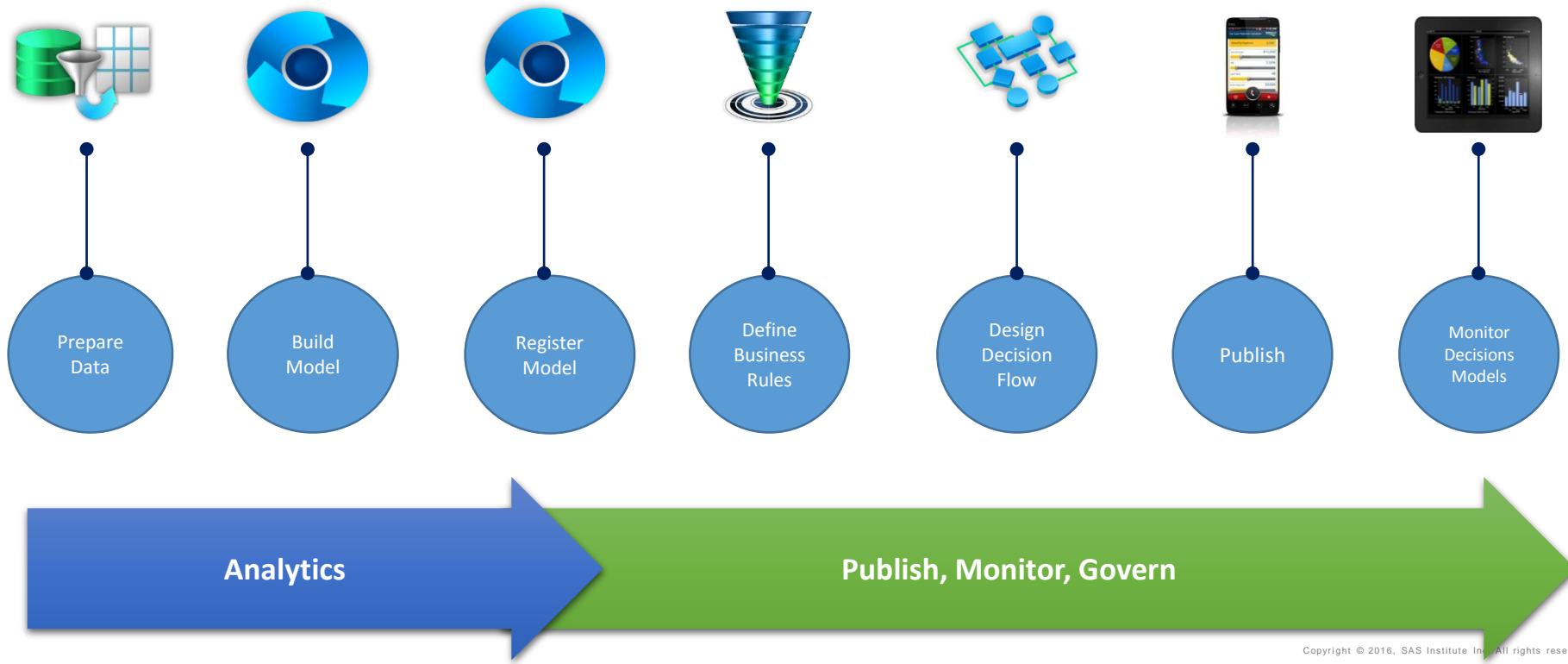






# Decision Process

Putting models to work



**DEMO**

An abstract graphic featuring several horizontal blue arrows pointing to the right. The arrows vary in thickness and are layered, with some appearing as solid bands and others as outlines. Interspersed among the blue arrows are three wavy, ribbon-like green lines that also flow from left to right. The overall composition suggests a sense of movement and flow.



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