Gold. It's a rare metal and one of the earth's most valuable and sought-after raw materials.

Smart Data @ BW Bank

Gerrit Bungeroth, BW-Bank

Stefan Weingärtner, AdvancedAnalytics.Academy

16. March 2017

Agenda

Agenda

1 Company Profile

Regional Customer-Driven Bank.

LB≡BW

BW|Bank	LB≡BW	LB≡BW
Baden-Württembergische Bank	Rheinland-Pfalz Bank	Sachsen Bank

Data and facts

- Head offices: Stuttgart, Mainz, Karlsruhe, Mannheim
- Employees in the Group: > 10,000
- LBBW offices across Germany: > 200
- LBBW offices around the world: 19

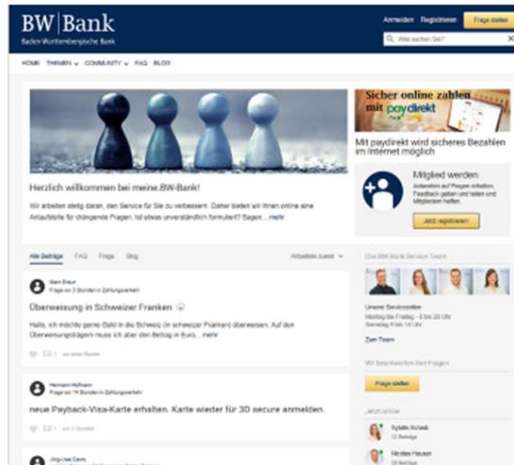| Private customers	Private banking	Wealth Management
Multi-channel bank: branch supplemented with online and telephone banking, apps and video-based advisory services	Strategic and comprehensive advice Special competence with freelancers and caring professions	Assistance with large assets and complex structures

1 Company Profile

Digital is changing Retail Banking customer experience.
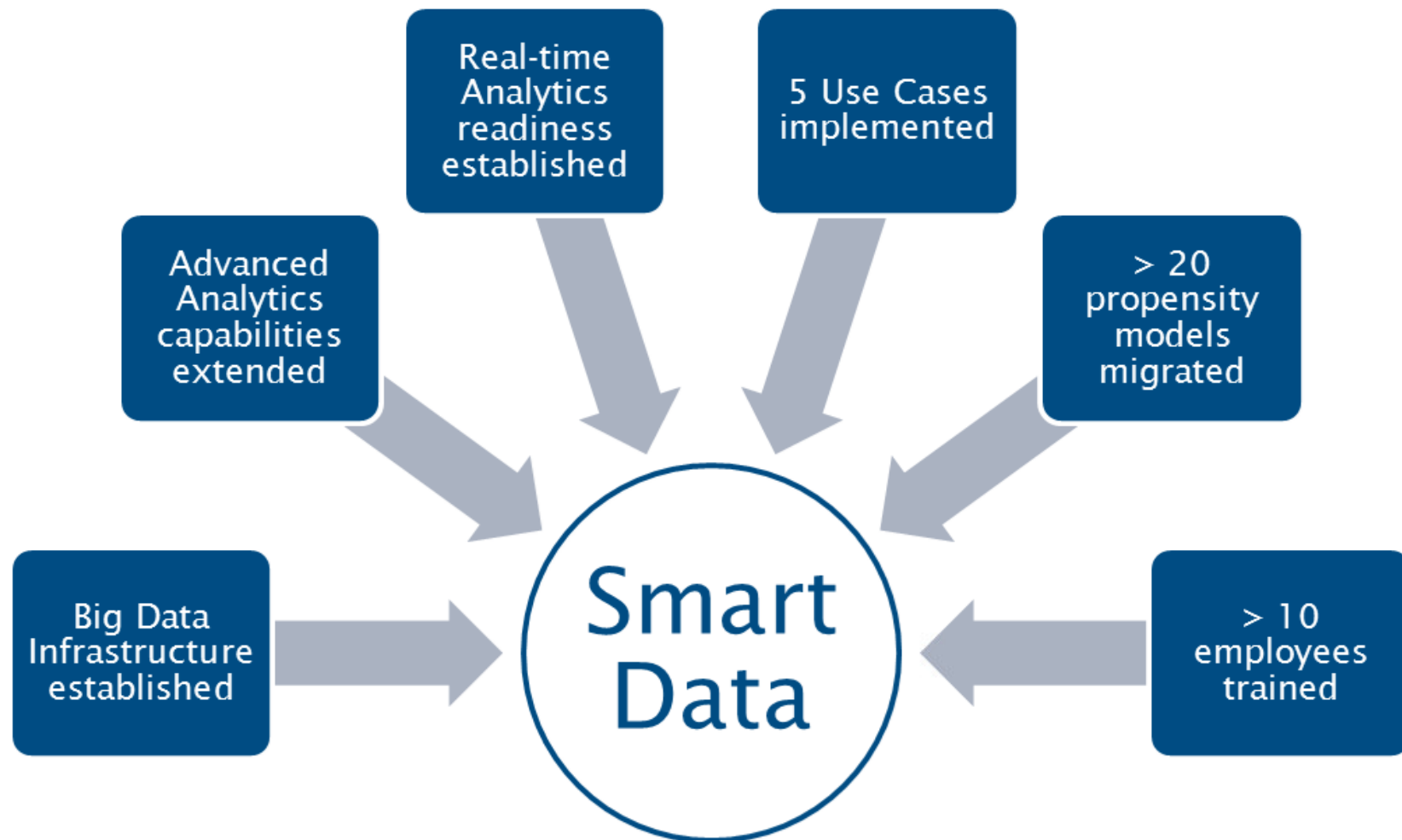
Agenda

2 Project Smart Data

From Database Marketing to Smart Data.
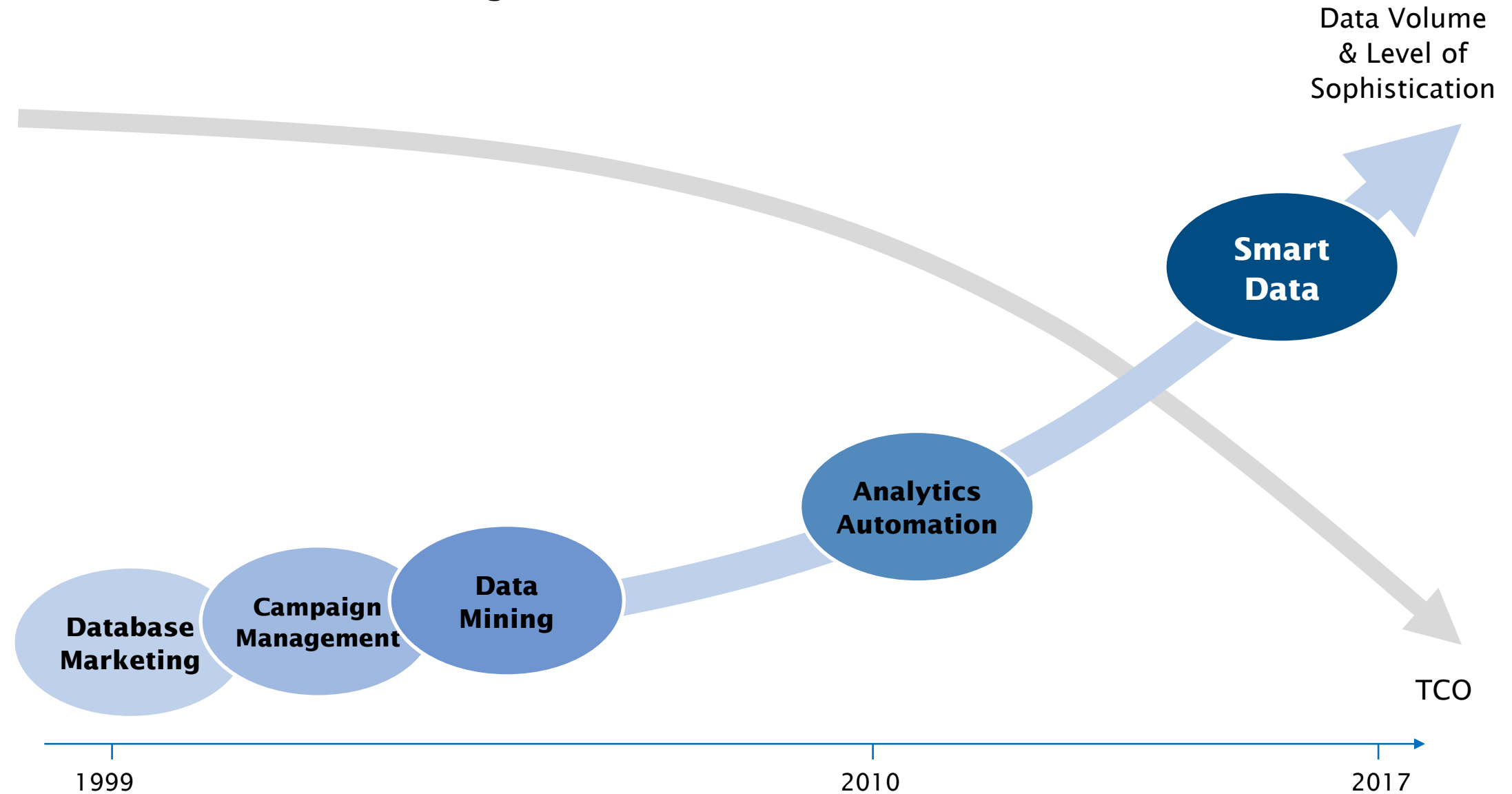
2 Project Smart Data

Rapid Deployment - Implementation within 3 months.

2 Project Smart Data

The role of AAA within the Smart Data Project.

Installation & Configuration

- Cassandra
- Spark
- KNIME

AdvancedAnalytics
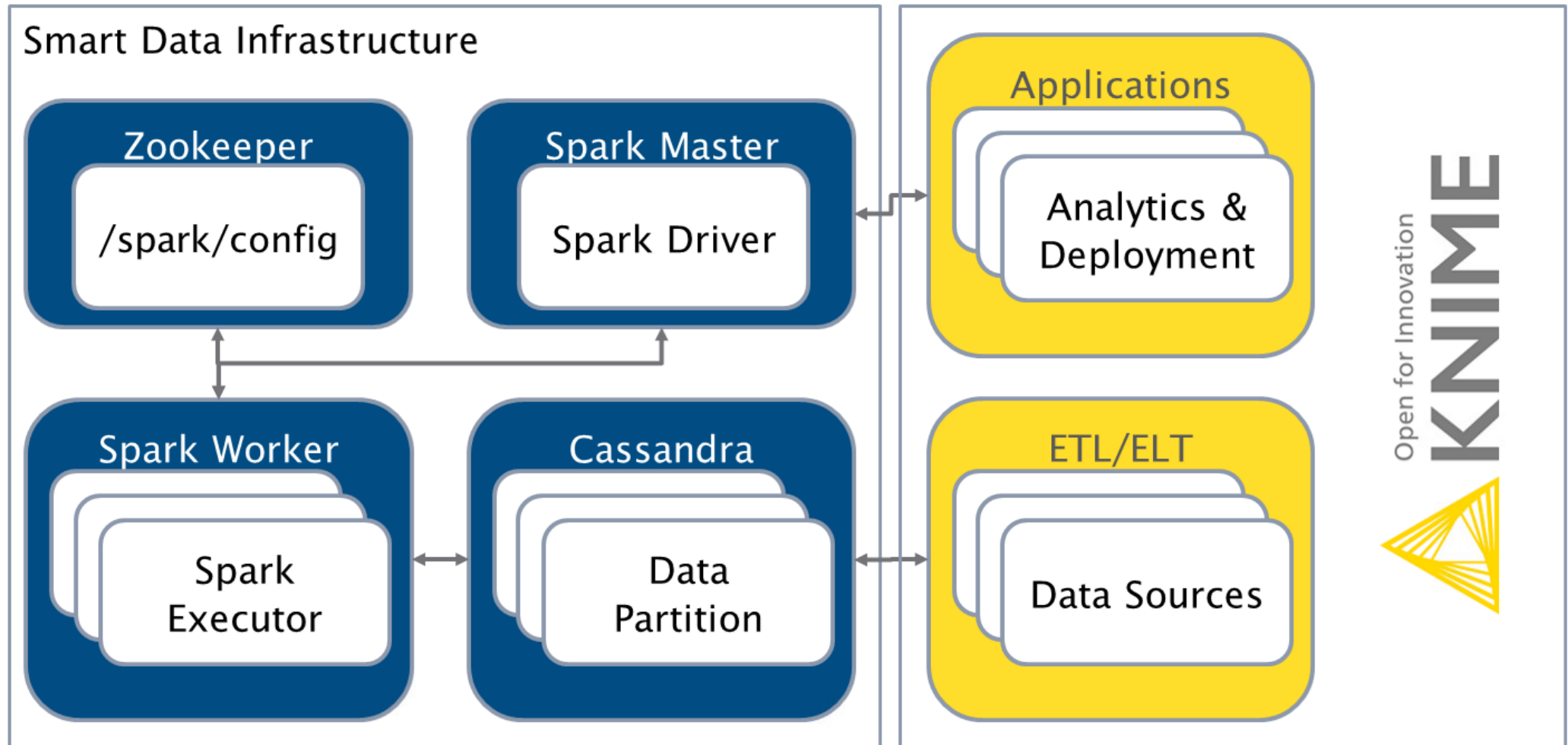.Academy

Consulting & Implementation

- Big Data Infrastructure
- Data Modeling & Data Management
- Machine Learning

Trainings

- KNIME User Training
- Fundamentals in Big Data & Advanced Analytics
- Spark Executor Node Training

2 Project Smart Data

Architecture.

Agenda

1   Company Profile

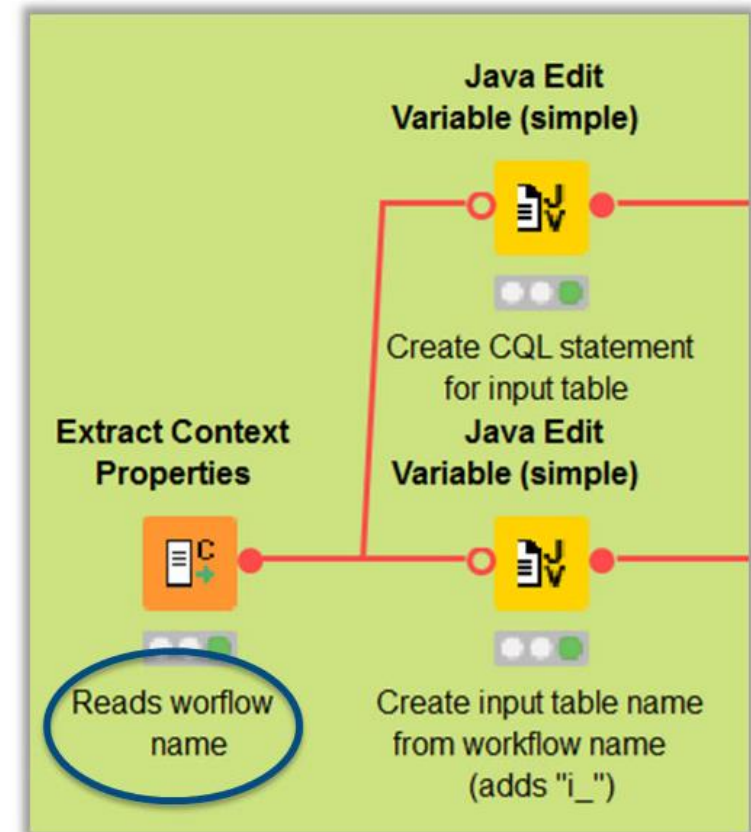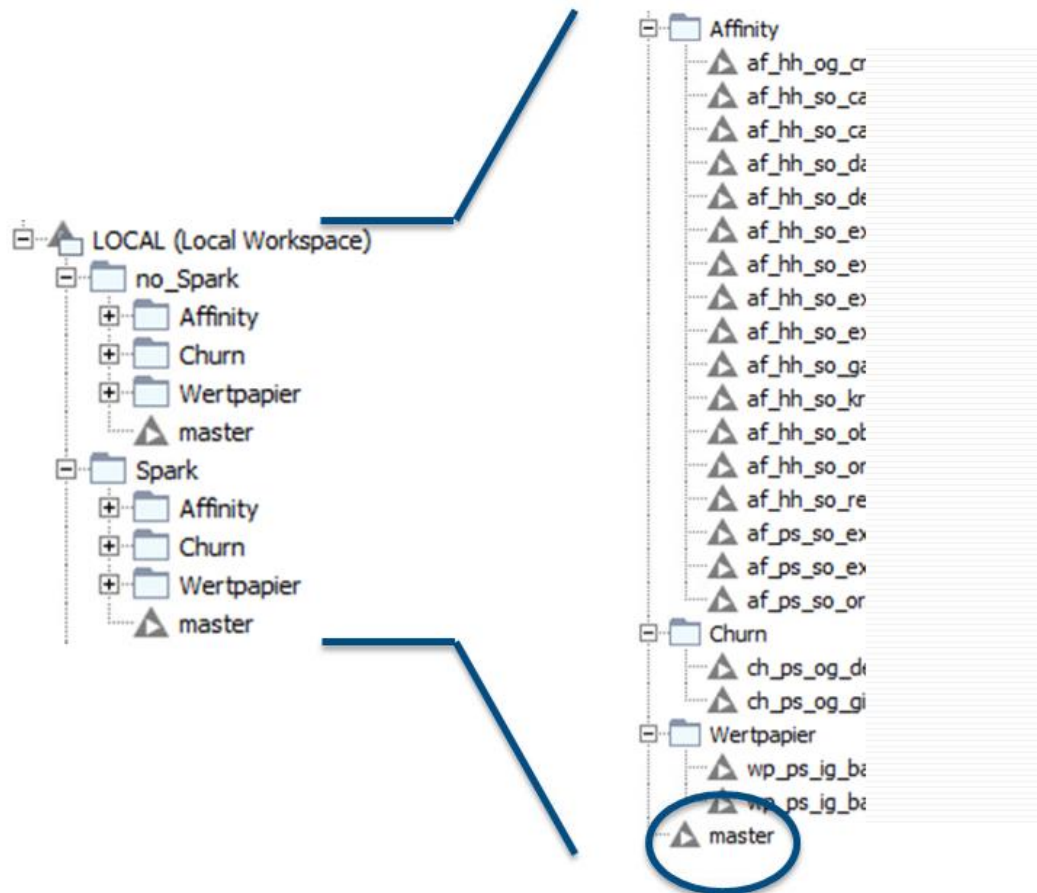2   Project Smart Data

3   Extract of implemented Use Cases
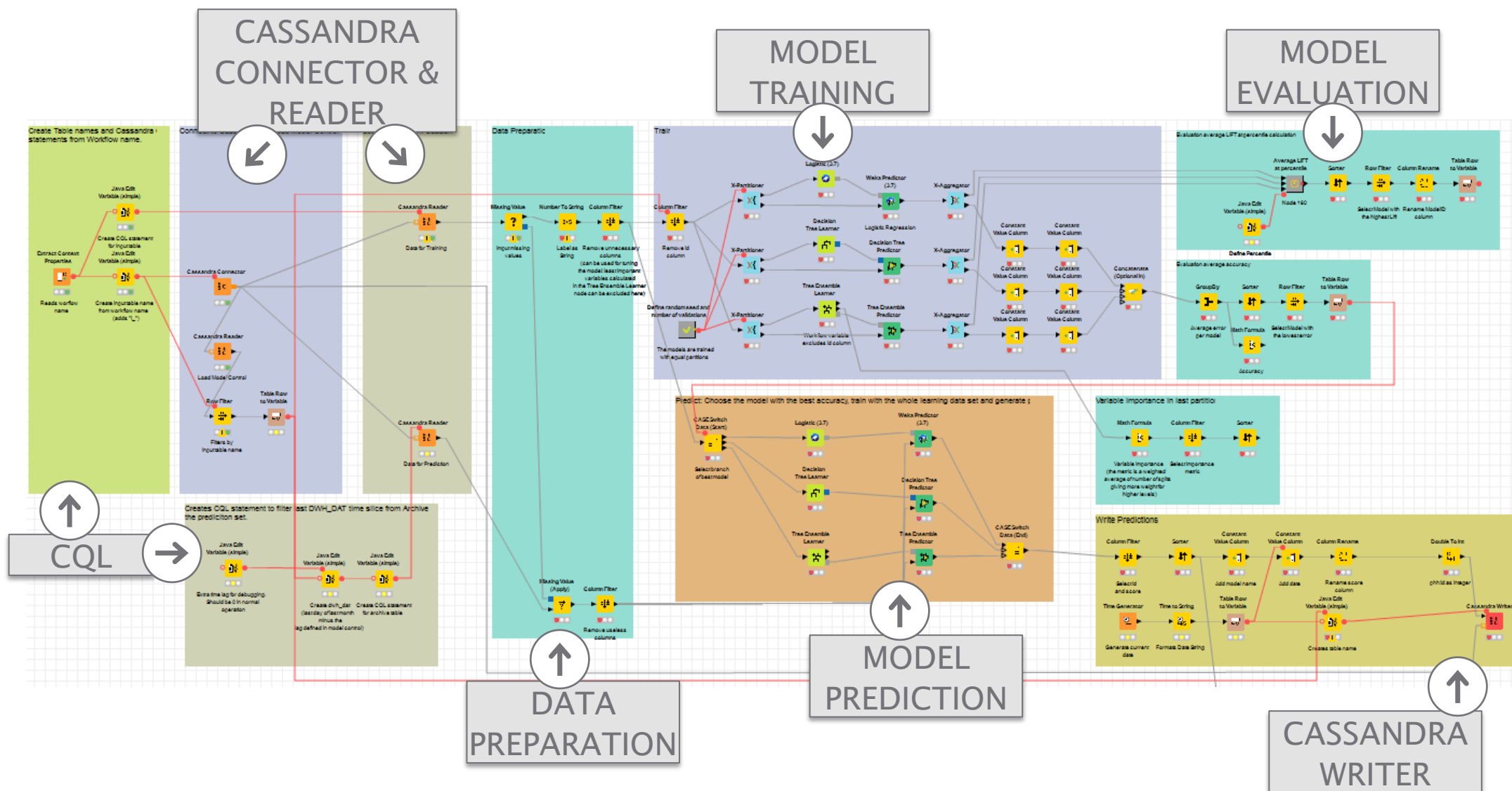
3.1 Migration of Legacy Propensity Models
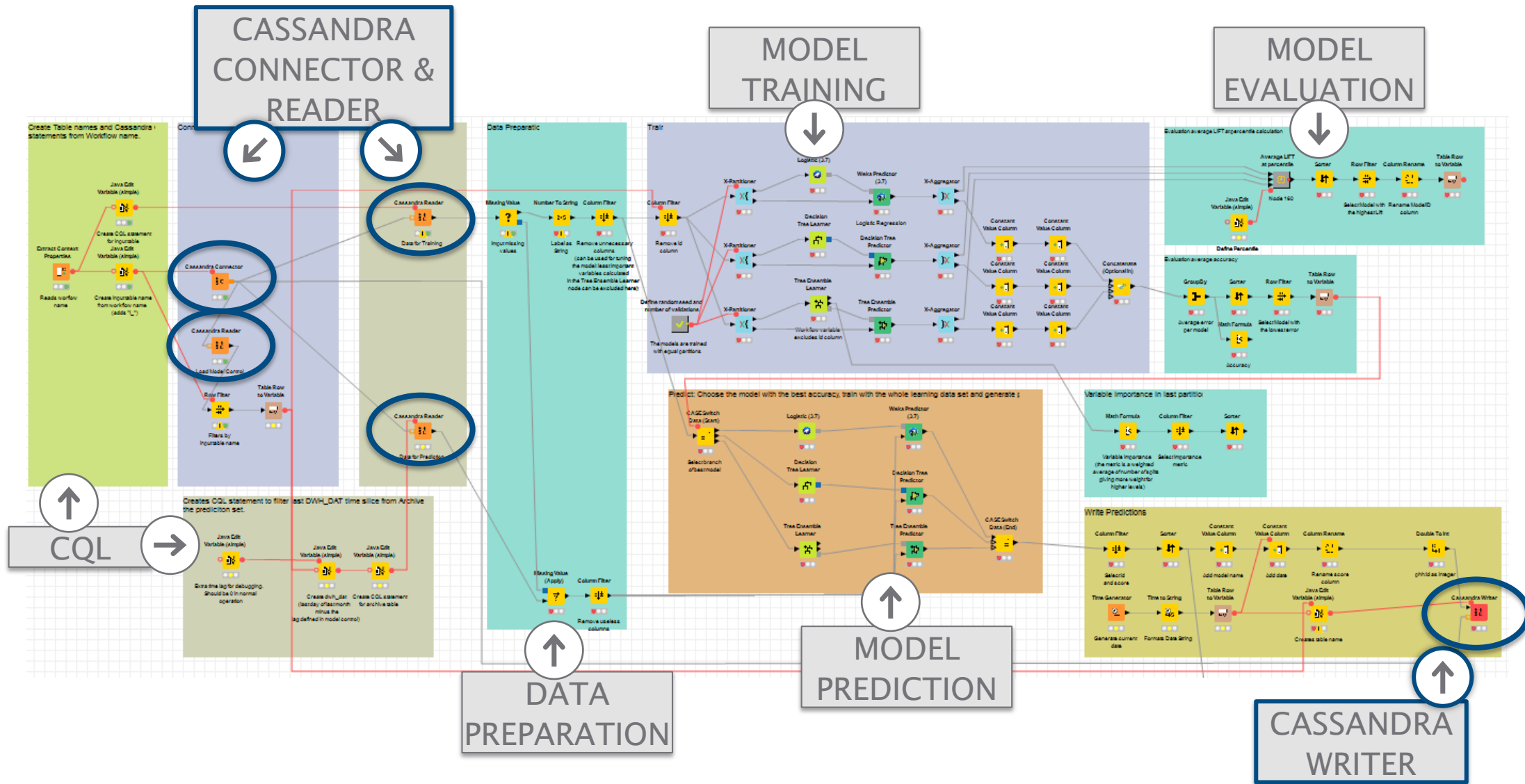
Migrating more than 20 Models to KNIME.

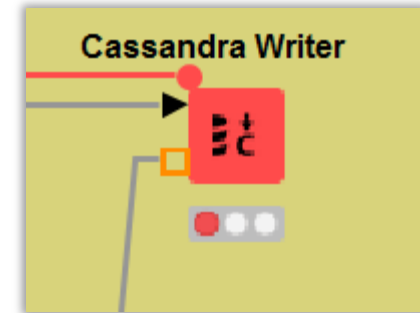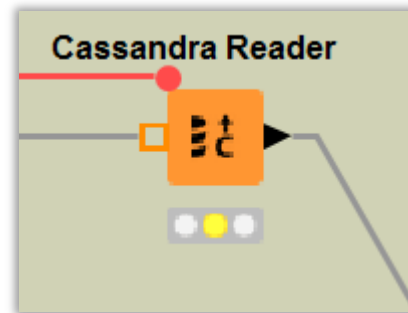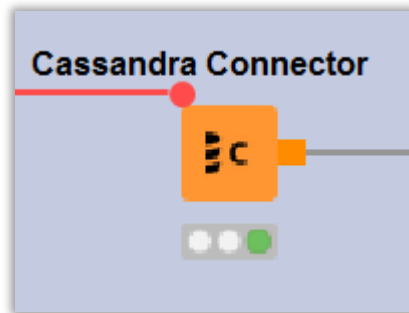3.1 Migration of Legacy Propensity Models

Cassandra and KNIME.

3.1 Migration of Legacy Propensity Models

Cassandra and KNIME.

3.1 Migration of Legacy Propensity Models
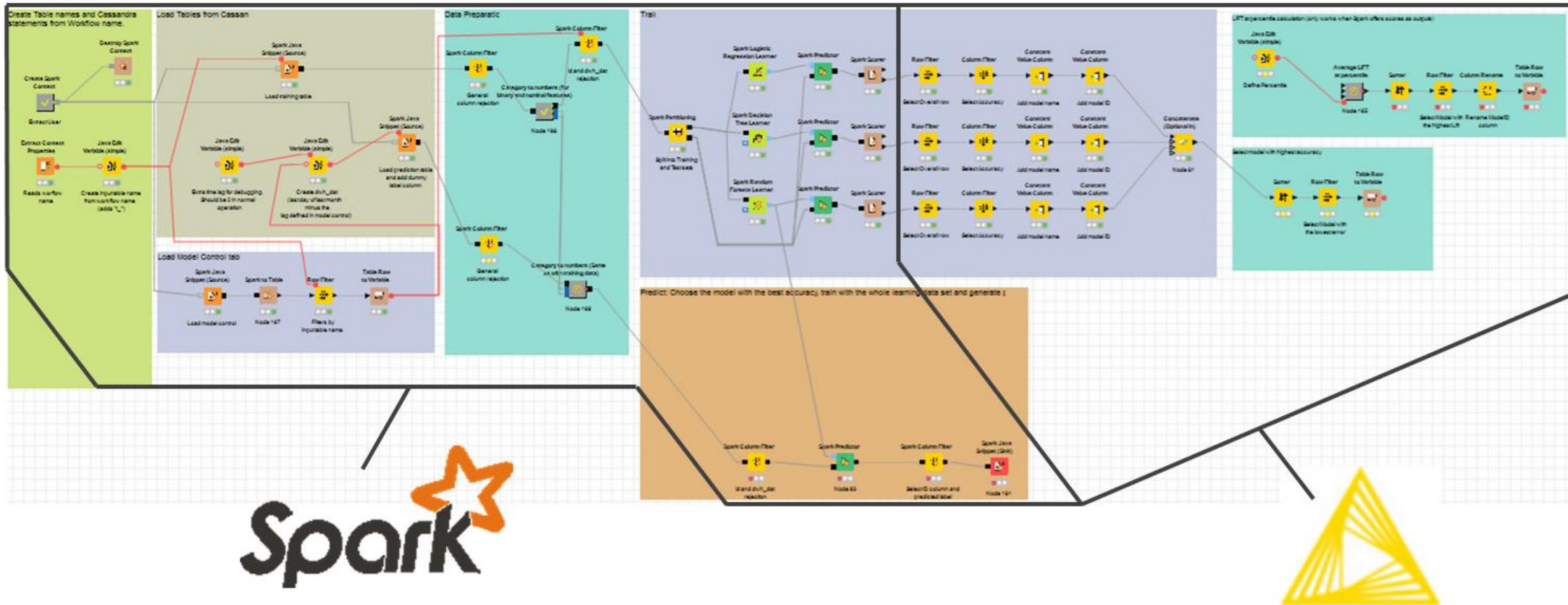
New nodes by AdvancedAnalytics.Academy

3.1 Migration of Legacy Propensity Models
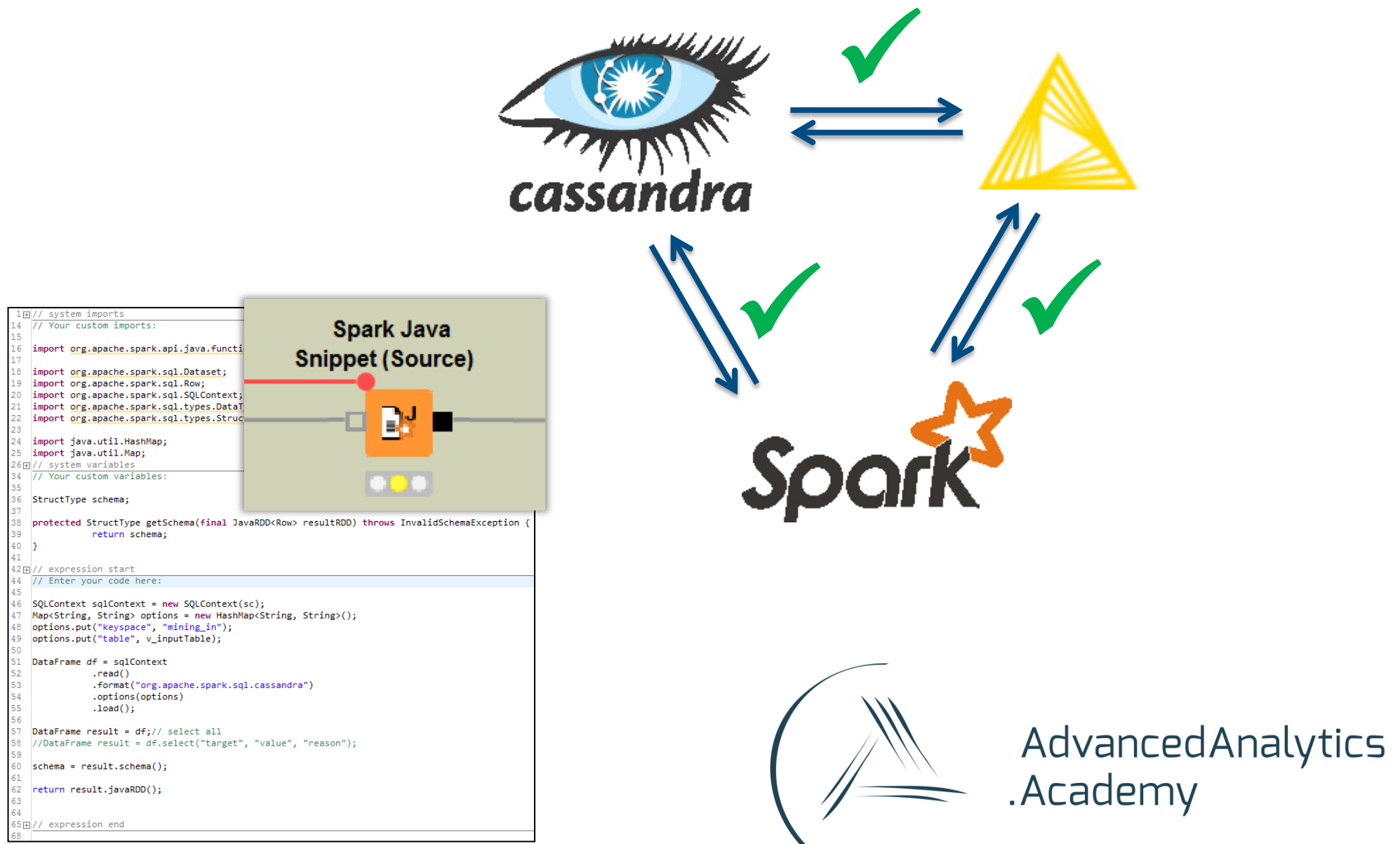
Cassandra and Spark and KNIME.

3.1 Migration of Legacy Propensity Models

Yes, they blend! Communication between Cassandra, Spark and KNIME.

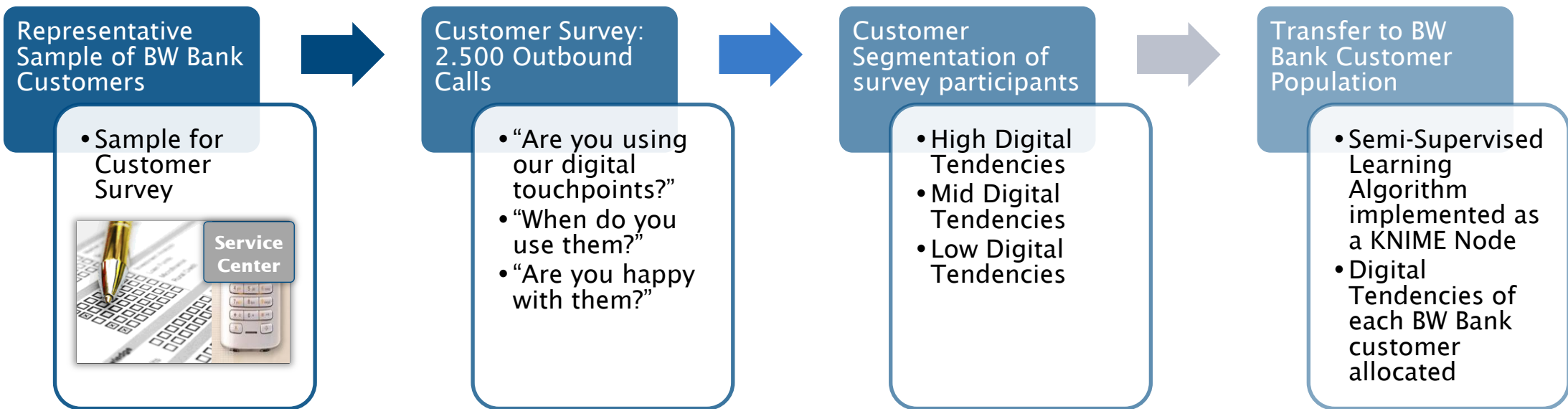# Agenda

3.2 Segmentation of Customers' Digital Tendencies

Traditional (offline) Customer Segmentation approaches are missing the point.

NATIVE

SOPHIE, DIGITAL STARTER
- 21 Jahre
- Ausbildung zur Bürokauffrau
- in einer festen Beziehung
- keine Kinder

JAN, DIGITAL TRENDSETTER
- 35 Jahre
- Creative Director
- Single
- keine Kinder

HYBRID

LAURA, SELECTIVE HYBRID
- 27 Jahre
- Jura - Studentin, Referendarin
- in einer festen Beziehung
- keine Kinder

JÜRGEN, EMERGING HYBRID
- 57 Jahre
- Mittleres Management in Produktionsunternehmen
- Verheiratet, 1 Kind, 1 Enkelkind

DENIER

MARIA, DIGITALLY AFFEARED
- 72 Jahre
- In Rente, gut situiert
- Witwe, 4 Kinder, 3 Enkel

3.2 Segmentation of Customers' Digital Tendencies

A new customer segmentation approach using Semi-Supervised Learning.

Representative Sample of BW Bank Customers

- Sample for Customer Survey

Service Center

Customer Survey: 2.500 Outbound Calls

- "Are you using our digital touchpoints?"
- "When do you use them?"
- "Are you happy with them?"

Customer Segmentation of survey participants

- High Digital Tendencies
- Mid Digital Tendencies
- Low Digital Tendencies

Transfer to BW Bank Customer Population

- Semi-Supervised Learning Algorithm implemented as a KNIME Node
- Digital Tendencies of each BW Bank customer allocated
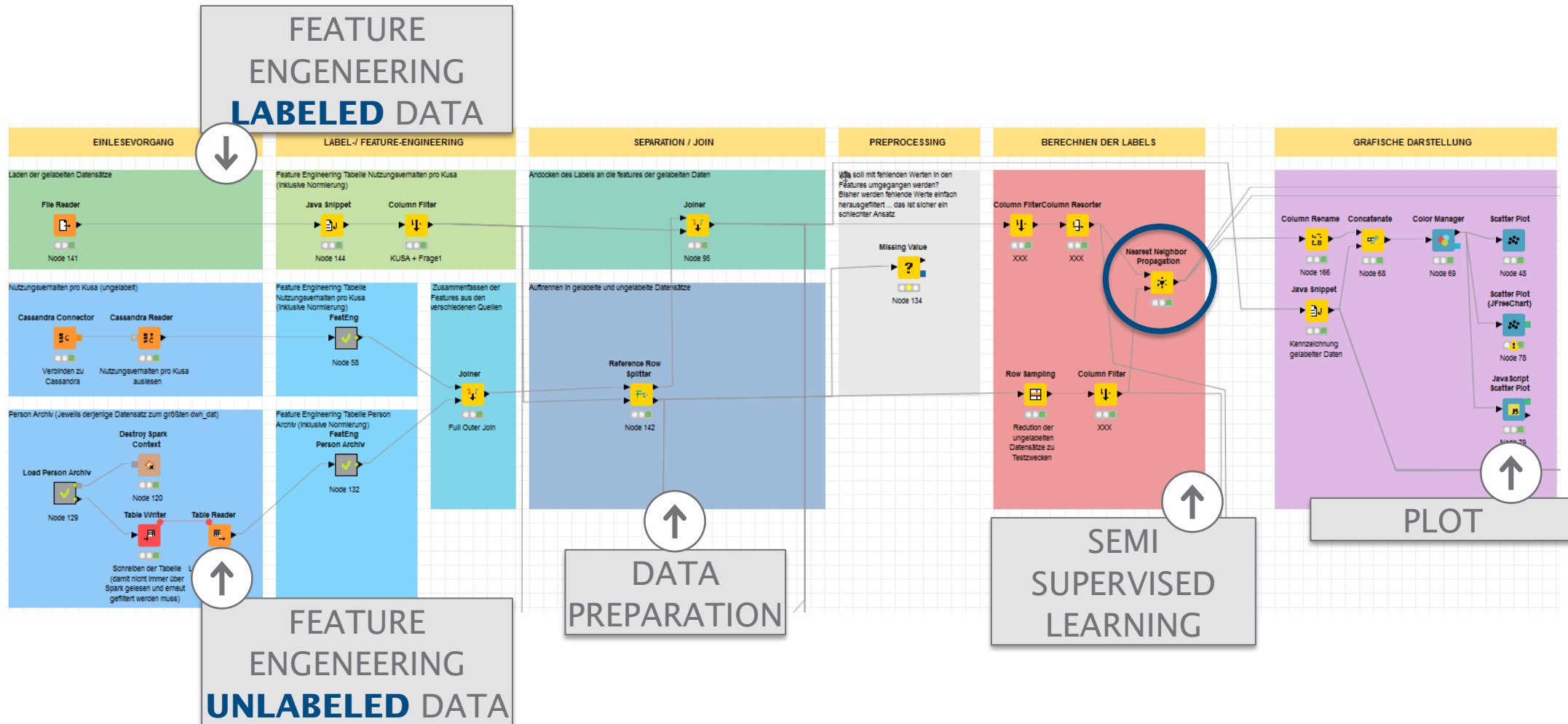
3.2 Segmentation of Customers' Digital Tendencies

Graph-based Semi-Supervised Learning.

1. Perform unsupervised learning on the unlabeled data.
2. Label propagation algorithm propagates the labels to surrounding unlabeled customers.
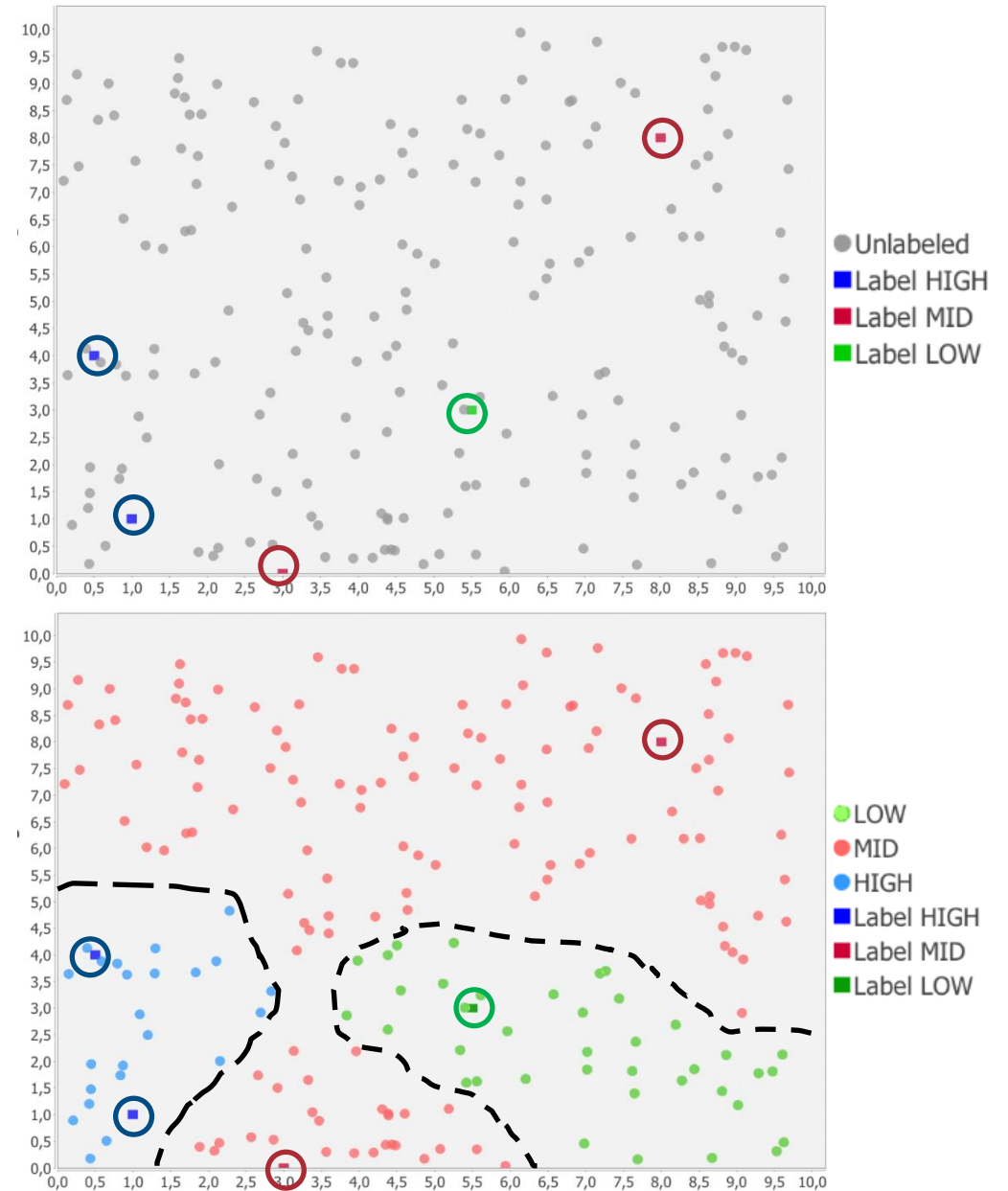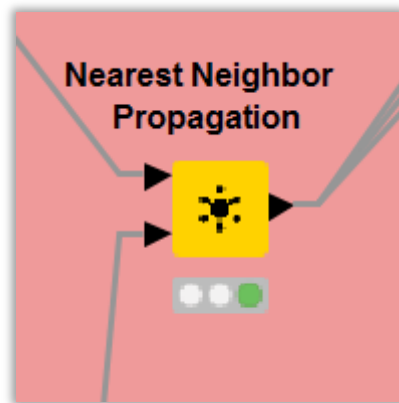
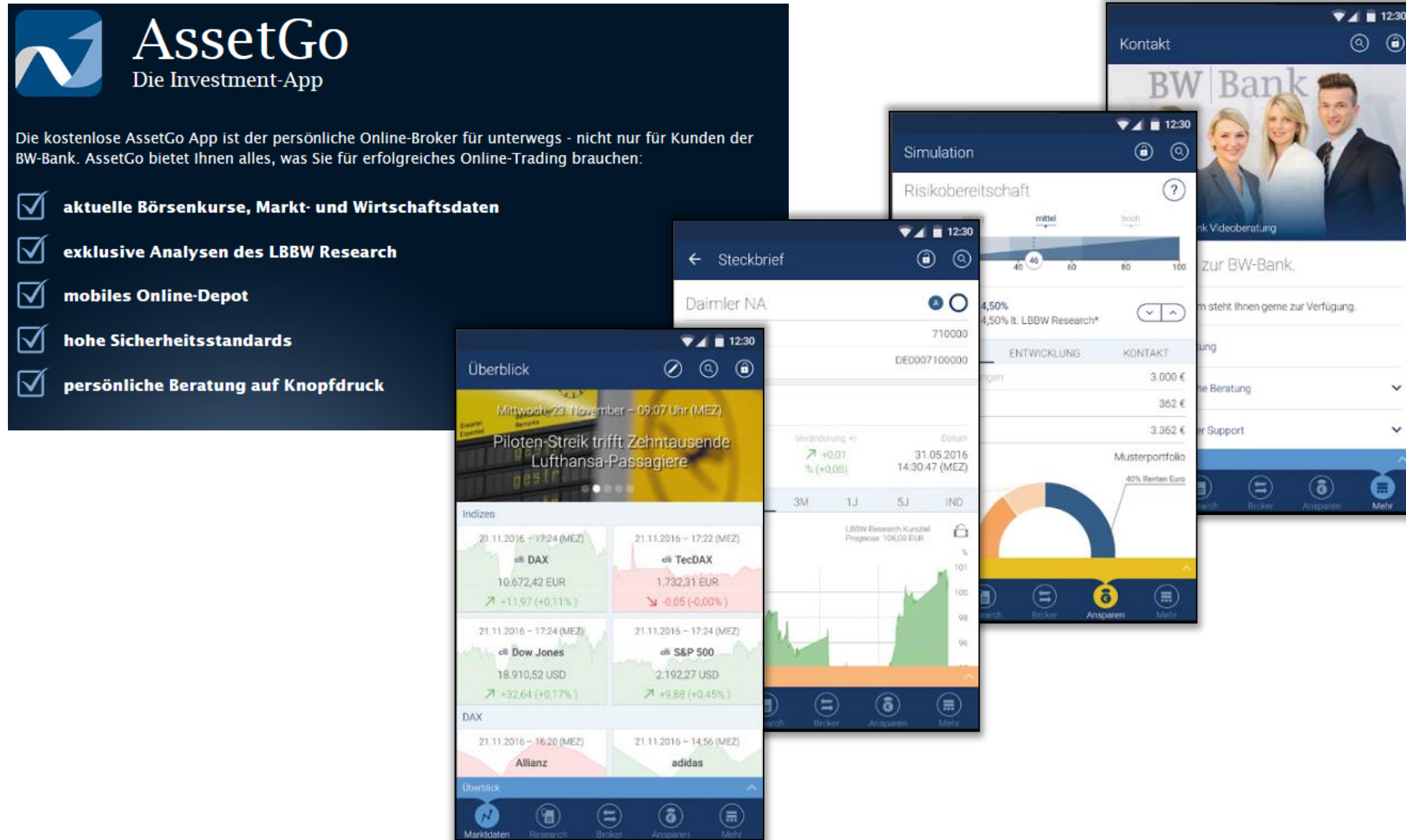3.2 Segmentation of Customers' Digital Tendencies

Semi Supervised Learning.

Agenda

1   Company Profile

2   Project Smart Data

3   Extract of implemented Use Cases

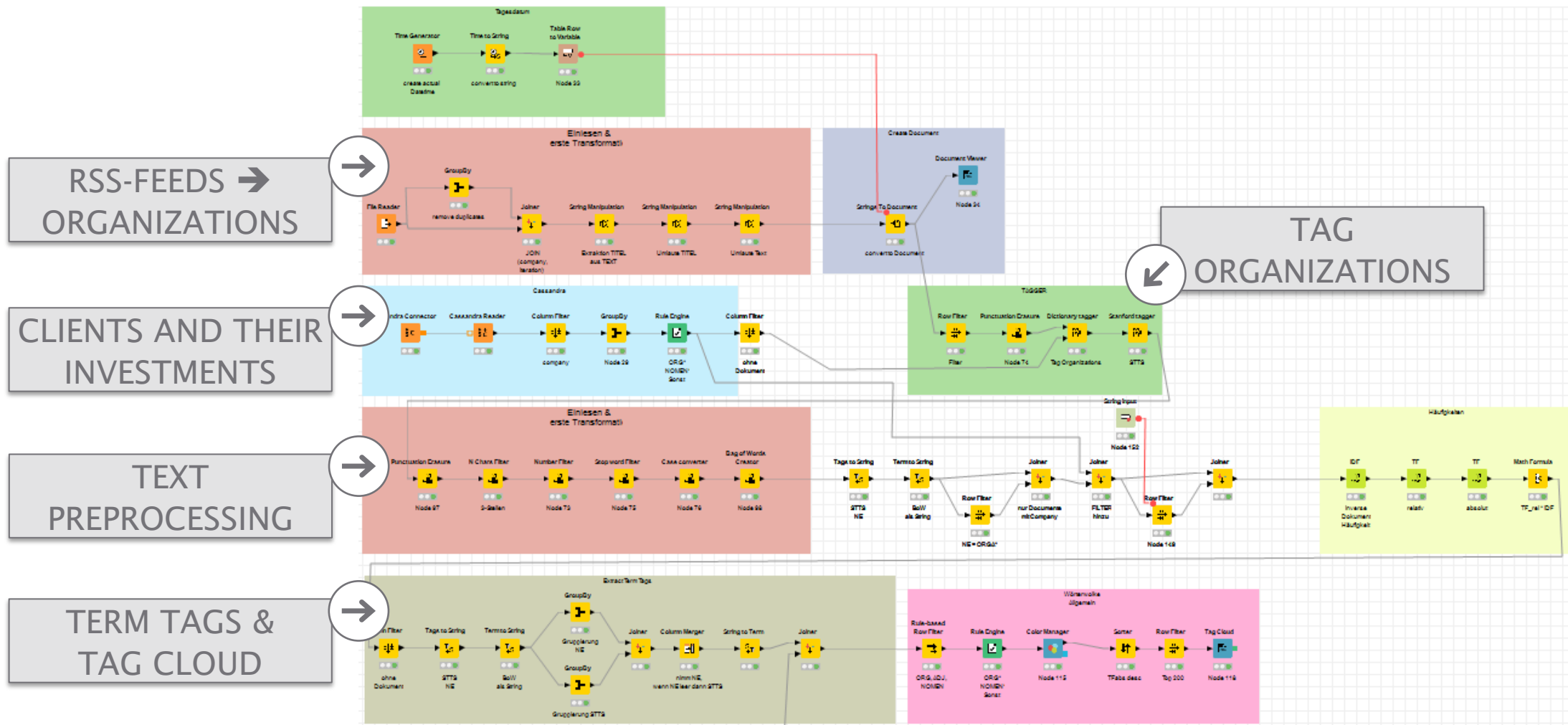3.3 Text Mining – RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.

3.3 Text Mining – RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.

3.3 Text Mining – RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.

3.3 Text Mining – RSS Integration (Newsfeeds)

Connecting Newsfeeds to Customers.

RSS-FEEDS ➜ ORGANIZATIONS

CLIENTS AND THEIR INVESTMENTS

TEXT PREPROCESSING

TERM TAGS & TAG CLOUD

TAG ORGANIZATIONS

QUESTIONS?

Thank you for your attention!

Baden-Württembergische Bank
Kleiner Schlossplatz 11
70173 Stuttgart