Introduction to Big Data

ECAP456

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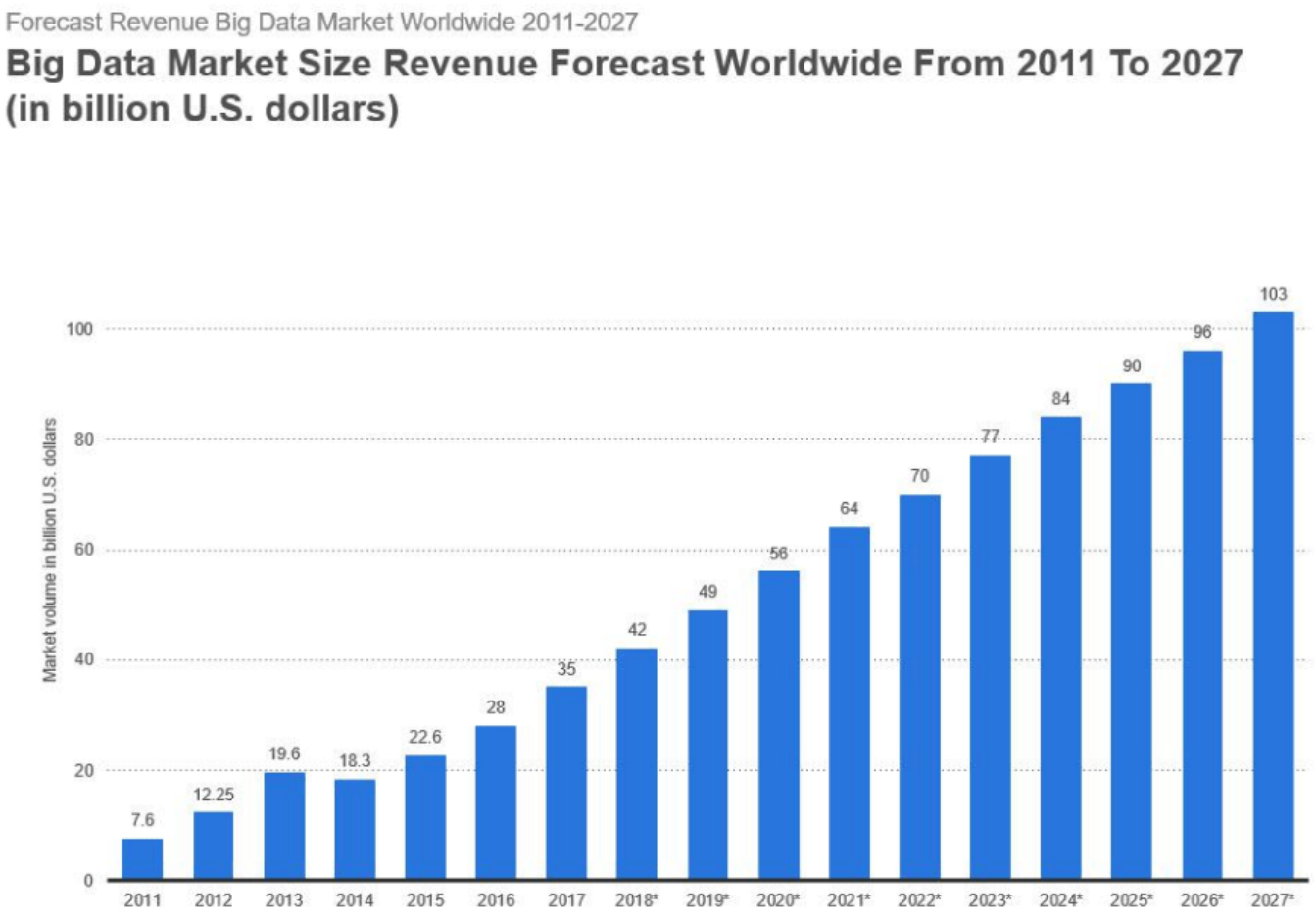
Learning Outcomes

After this lecture, you will be able to

- understand IBM InfoSphere Streams,
- learn a new paradigm for information processing, learn powerful, real-time analytic processing made simple,
- explore Enterprise integration and concepts of scale-out architecture,
- comprehensive tools and S*o*phisticated analytics with toolkits,
- learn InfoSphere Streams: System requirements.

Introduction



Generate data at a pace

Introduction

30 petabytes of data
through its network

Introduction

Dublin city center

Introduction

Twitter handles 340 million tweets daily

Introduction

Annual Internet traffic is expected to reach 1.3 zettabytes

Introduction

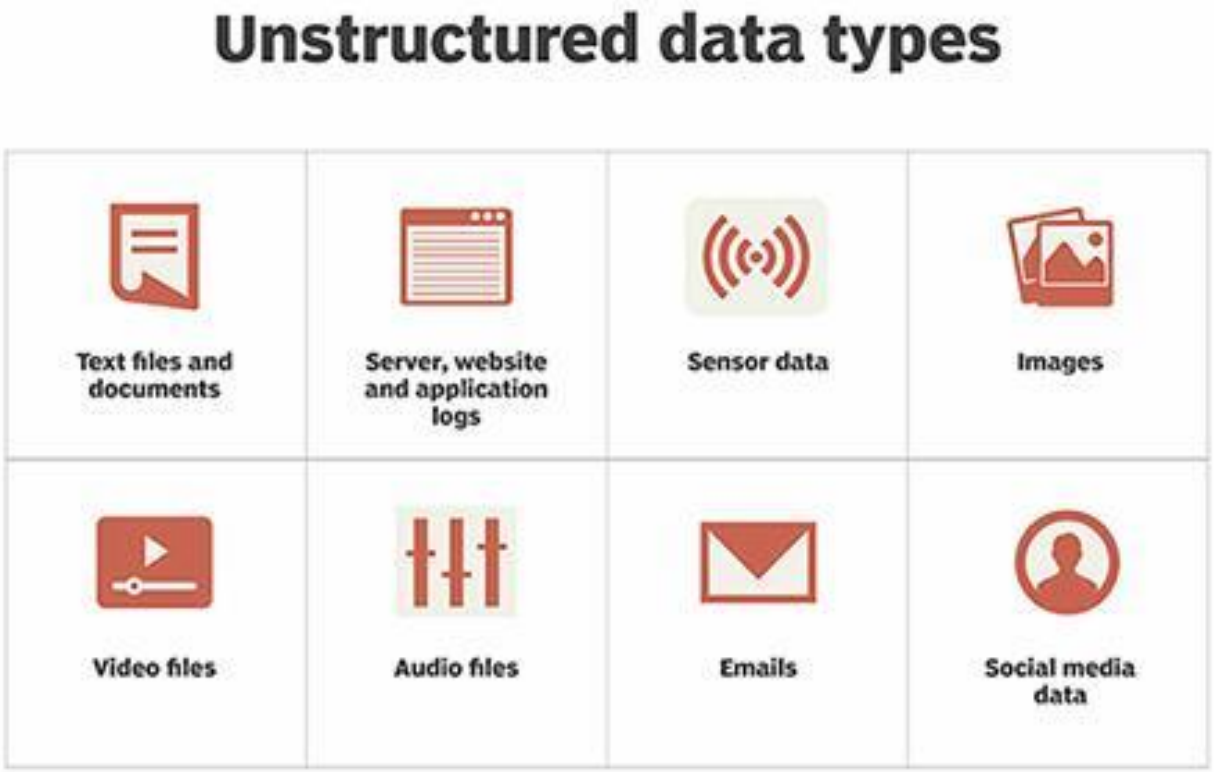
Today's organizations are challenged to make informed, real-time business decisions

Introduction

the savvy company

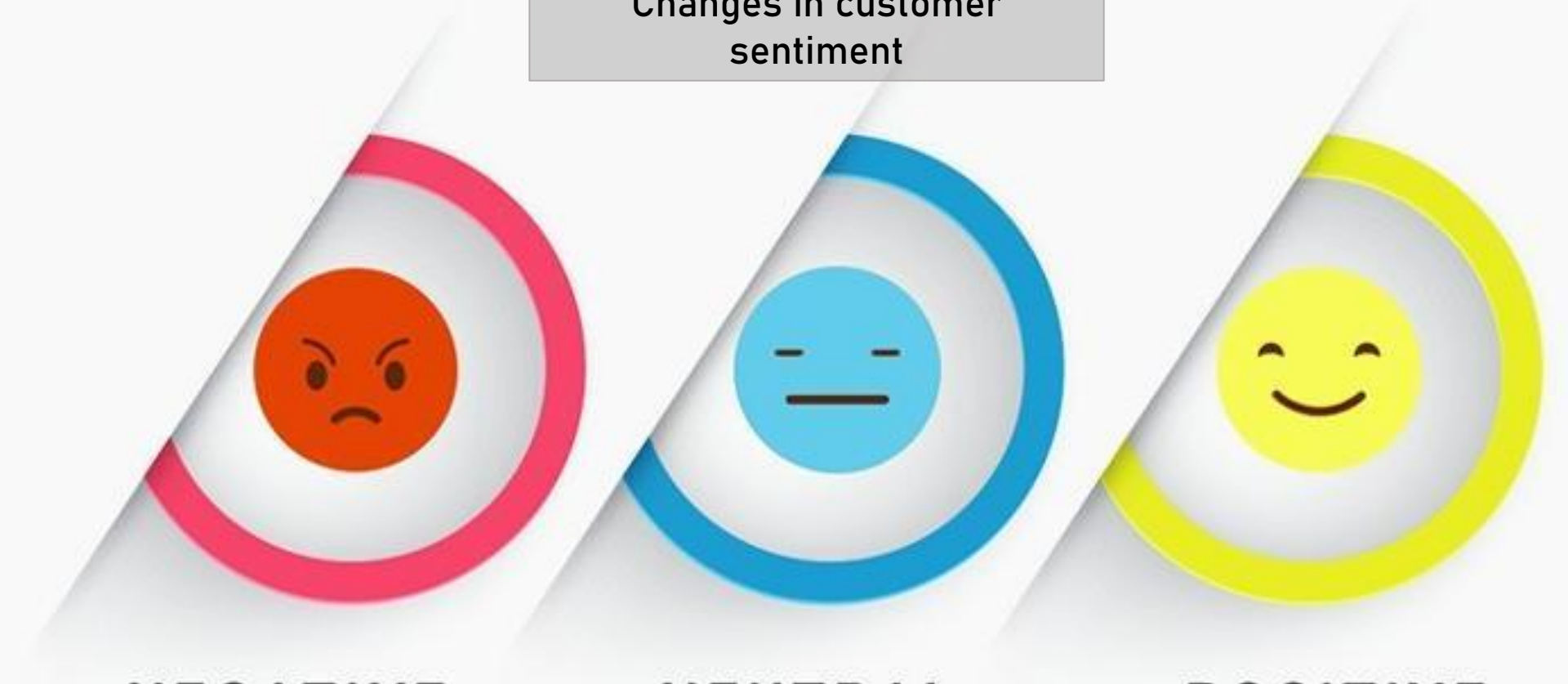
1. Extend the value of their existing systems
2. Generate significant business advantages

Introduction



SENTIMENT ANALYSIS

Changes in customer sentiment



NEGATIVE

Totally dissatisfied with the service. Worst customer care ever.

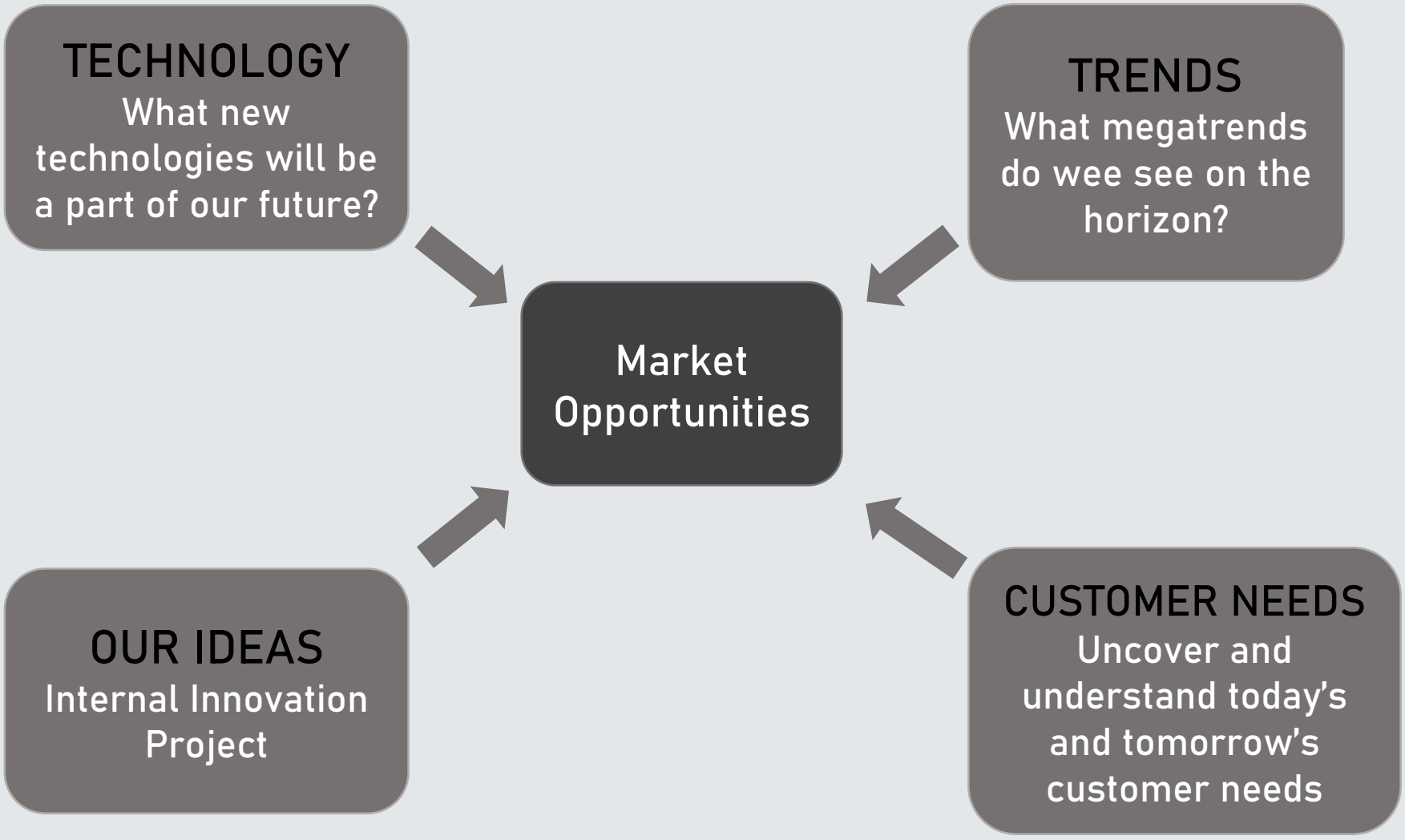
NEUTRAL

Good Job but I will expect a lot more in future.

POSITIVE

Brilliant effort guys! Loved Your Work.

Introduction



Introduction

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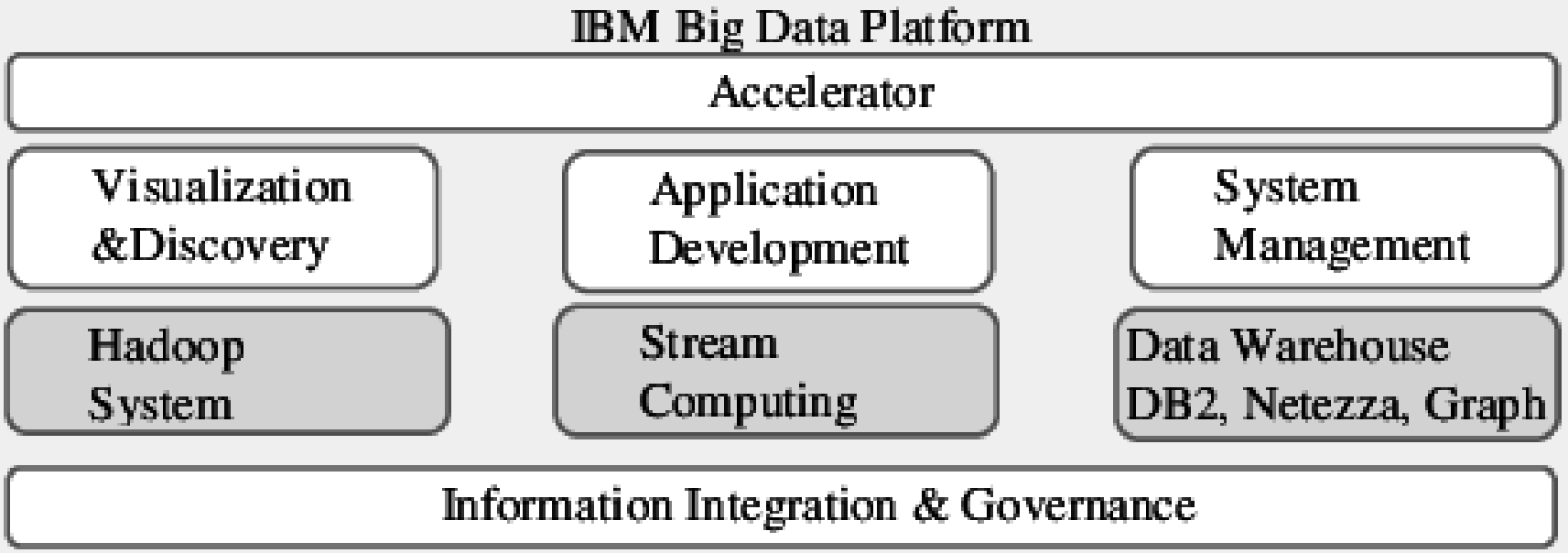


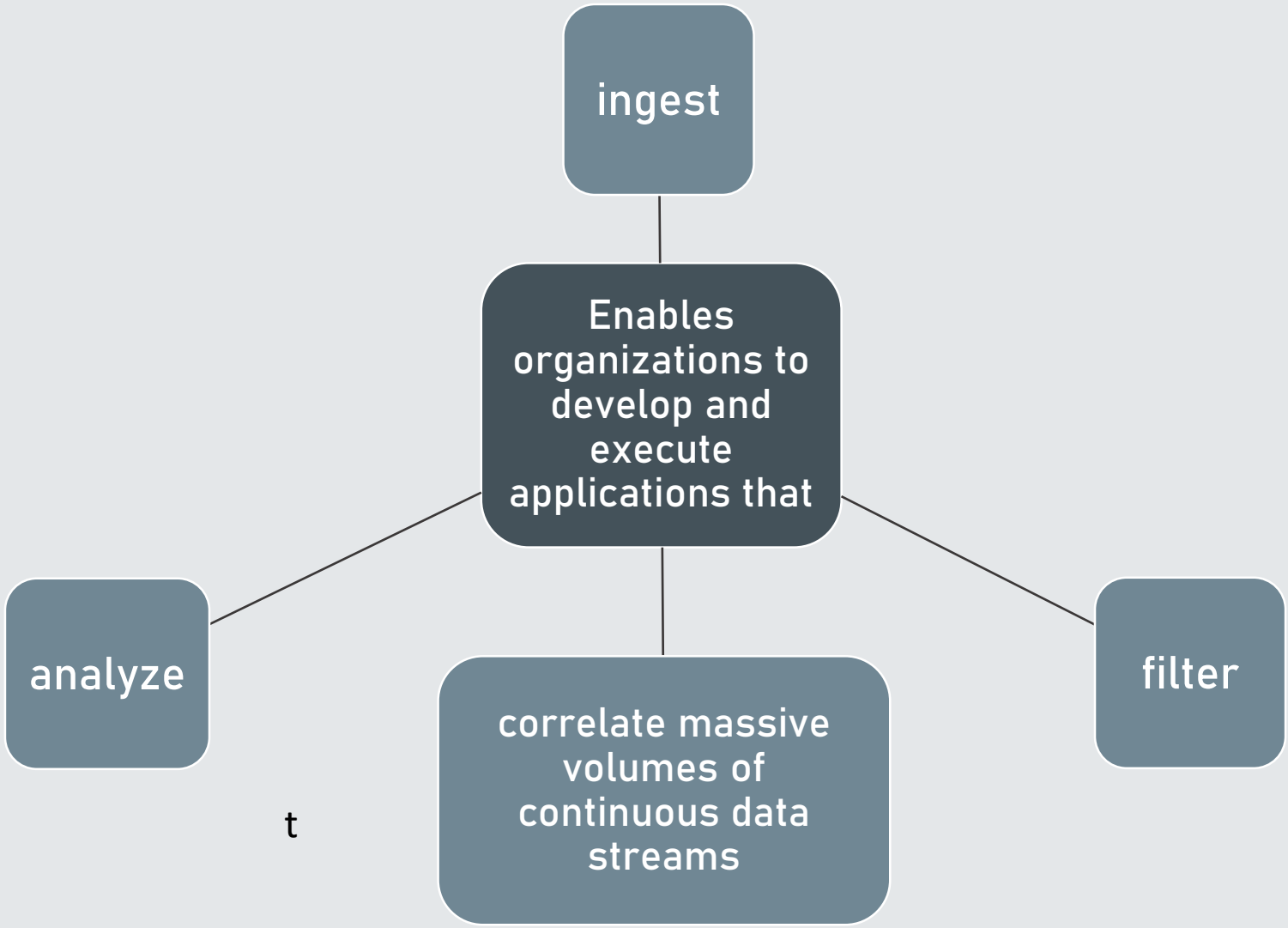
Introduction

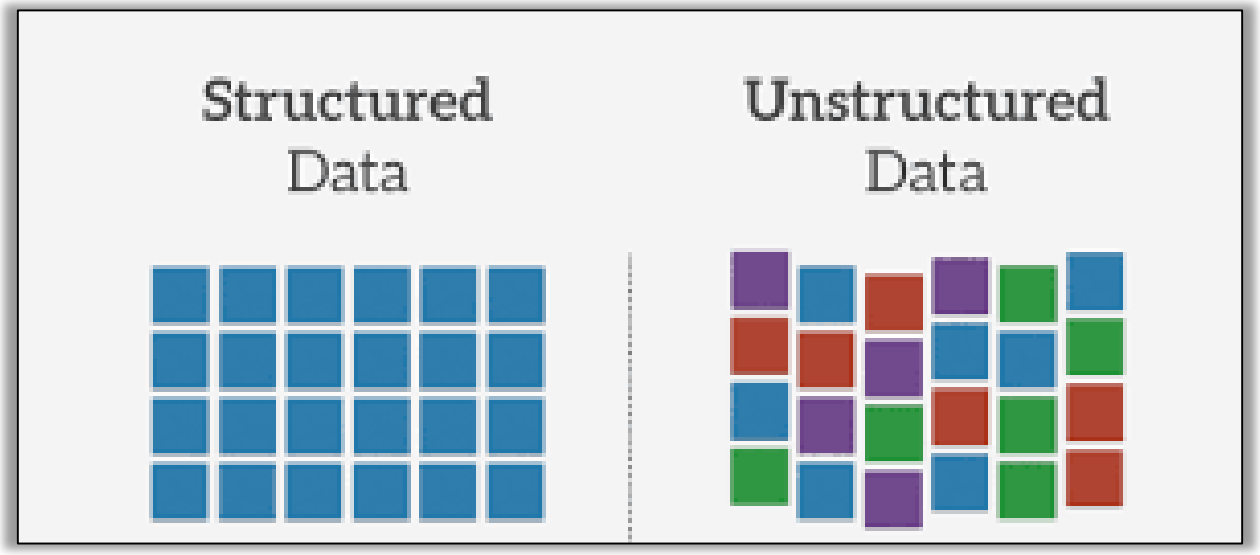
Capture and act on key business data

A new paradigm for information processing

Pioneering work from IBM Research

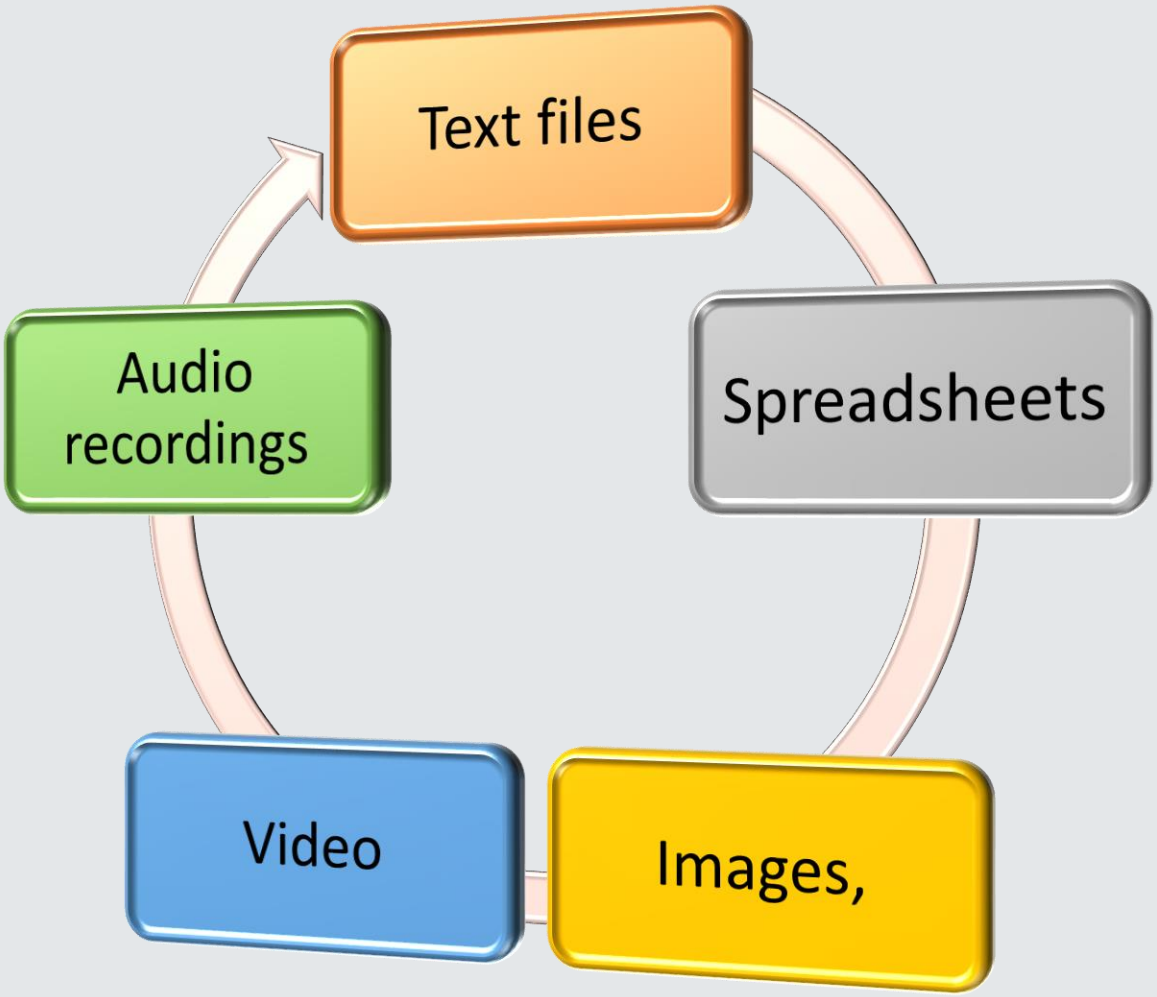
A new paradigm for information processing



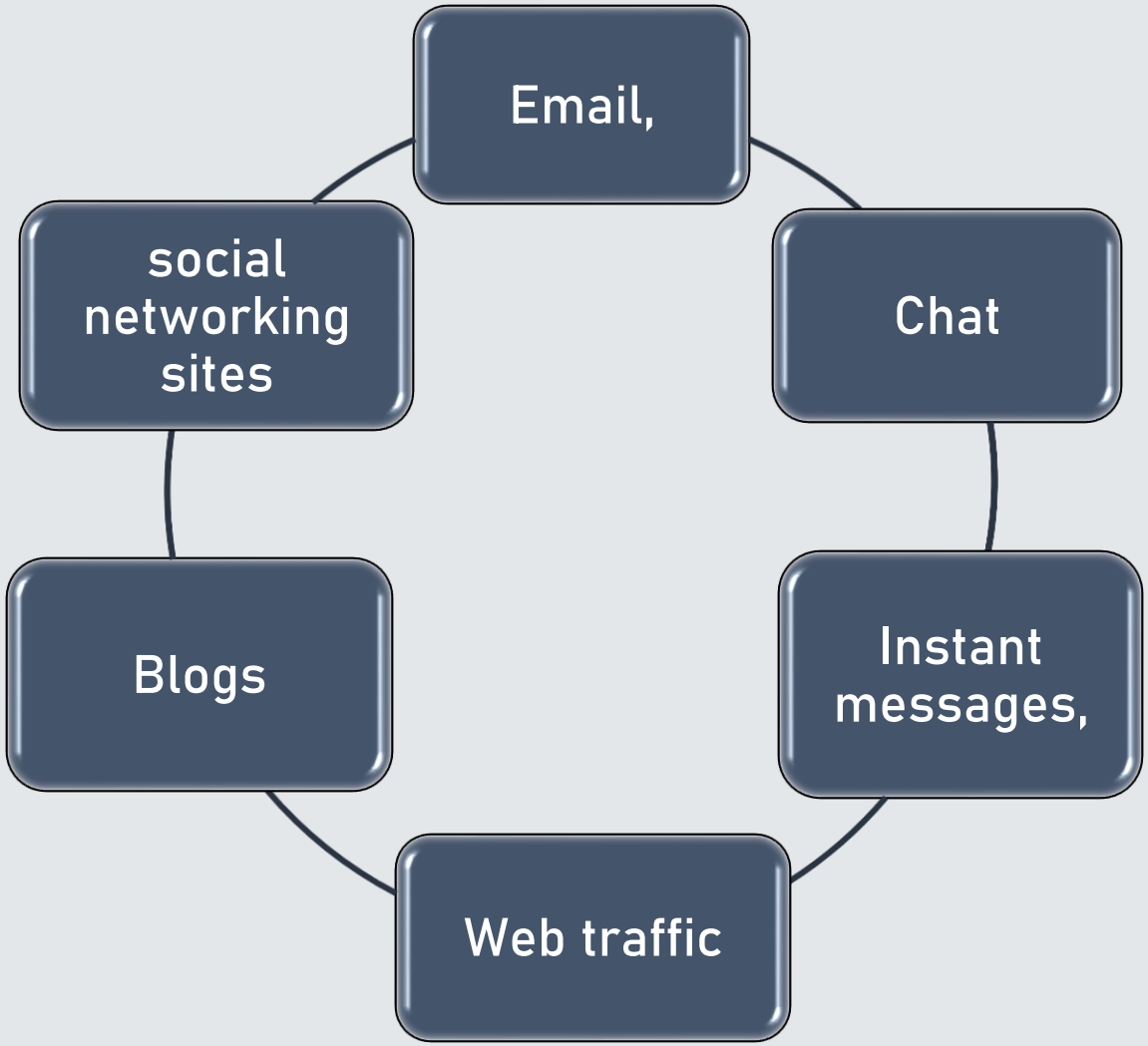


These data streams can come from both structured and unstructured data sources, and they can contain a wide range of digital data, including:

A new paradigm for information processing



A new paradigm for information processing



A new paradigm for information processing

Financial transactions,

customer service records,

telephone usage records,

system

application logs

A new paradigm for information processing

Data from satellites,

GPS tracking,

Smart devices

Network traffic sensors

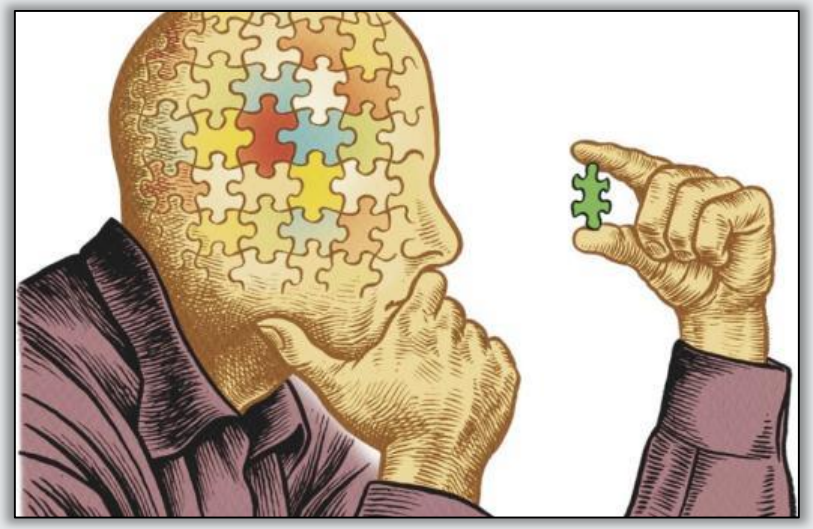
A new paradigm for information processing

Powerful data analysis

Powerful, real-time analytic processing made simple

Analyzing large volumes of data

Powerful, real-time analytic processing made simple

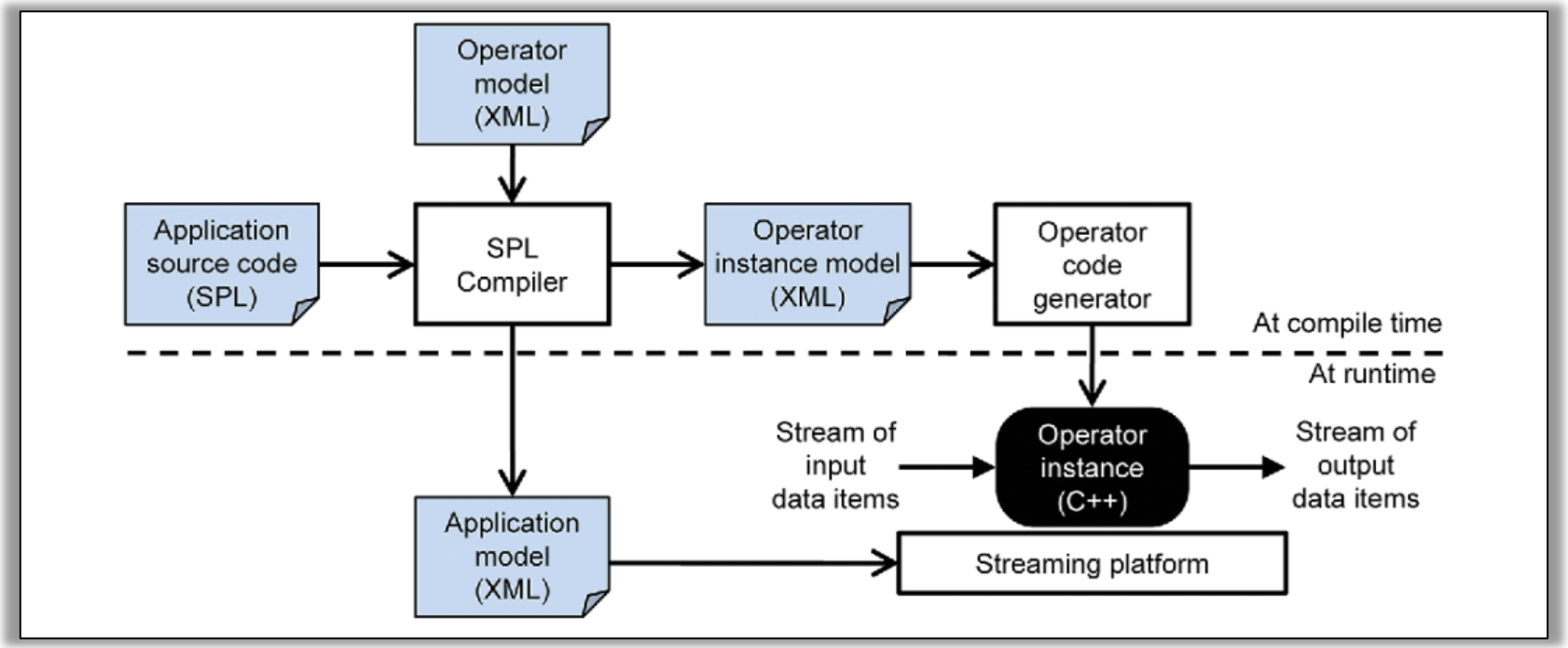


Continuously generated data is often critical for organizations

Powerful, real-time analytic processing made simple

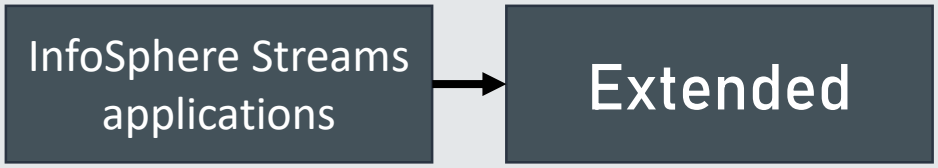
Market Alerts and Events

Powerful, real-time analytic processing made simple

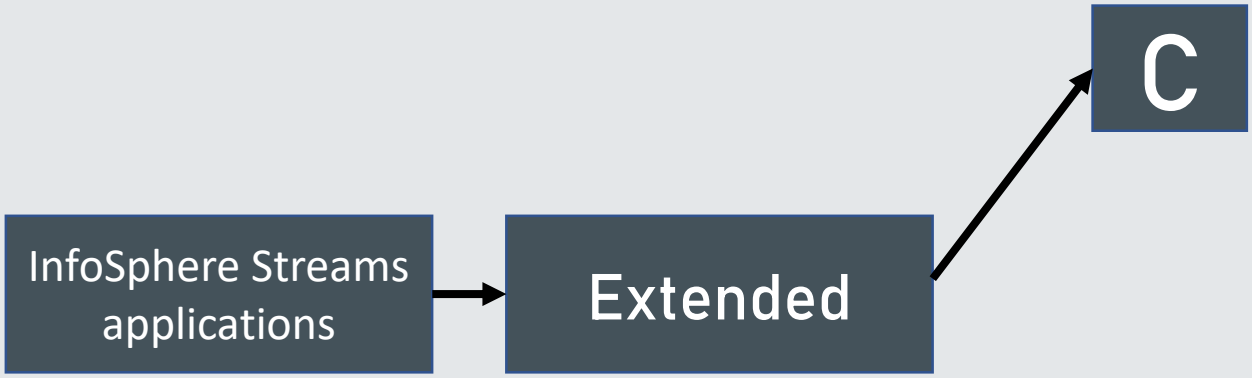


Compiling and running a stream processing application

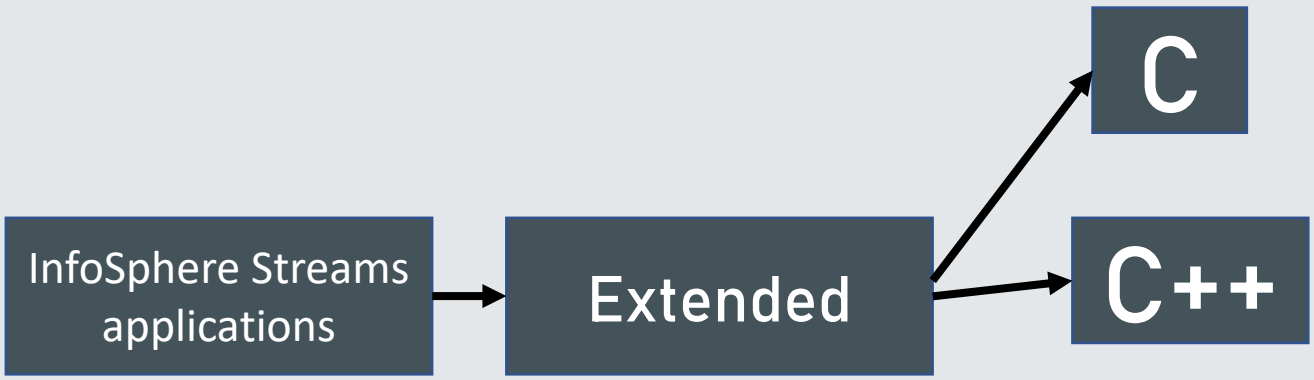
Powerful, real-time analytic processing made simple



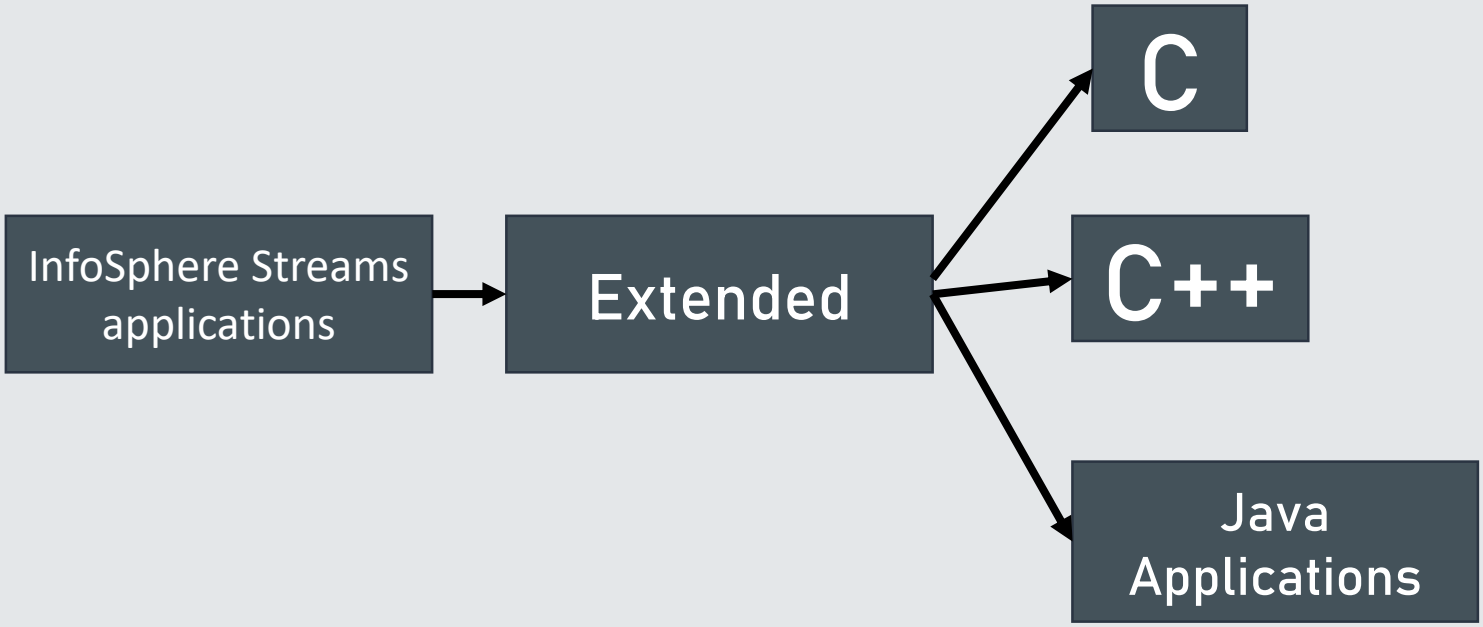
Powerful, real-time analytic processing made simple



Powerful, real-time analytic processing made simple



Powerful, real-time analytic processing made simple



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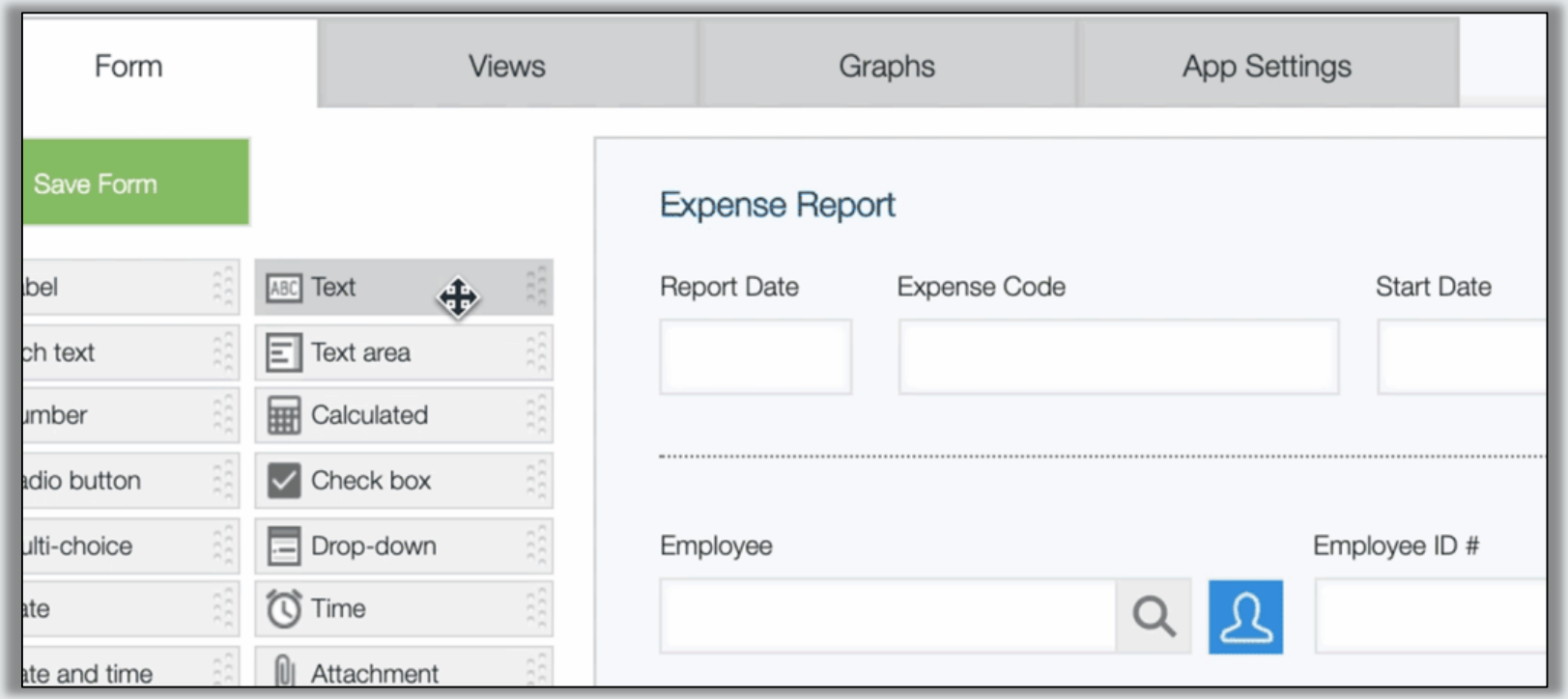
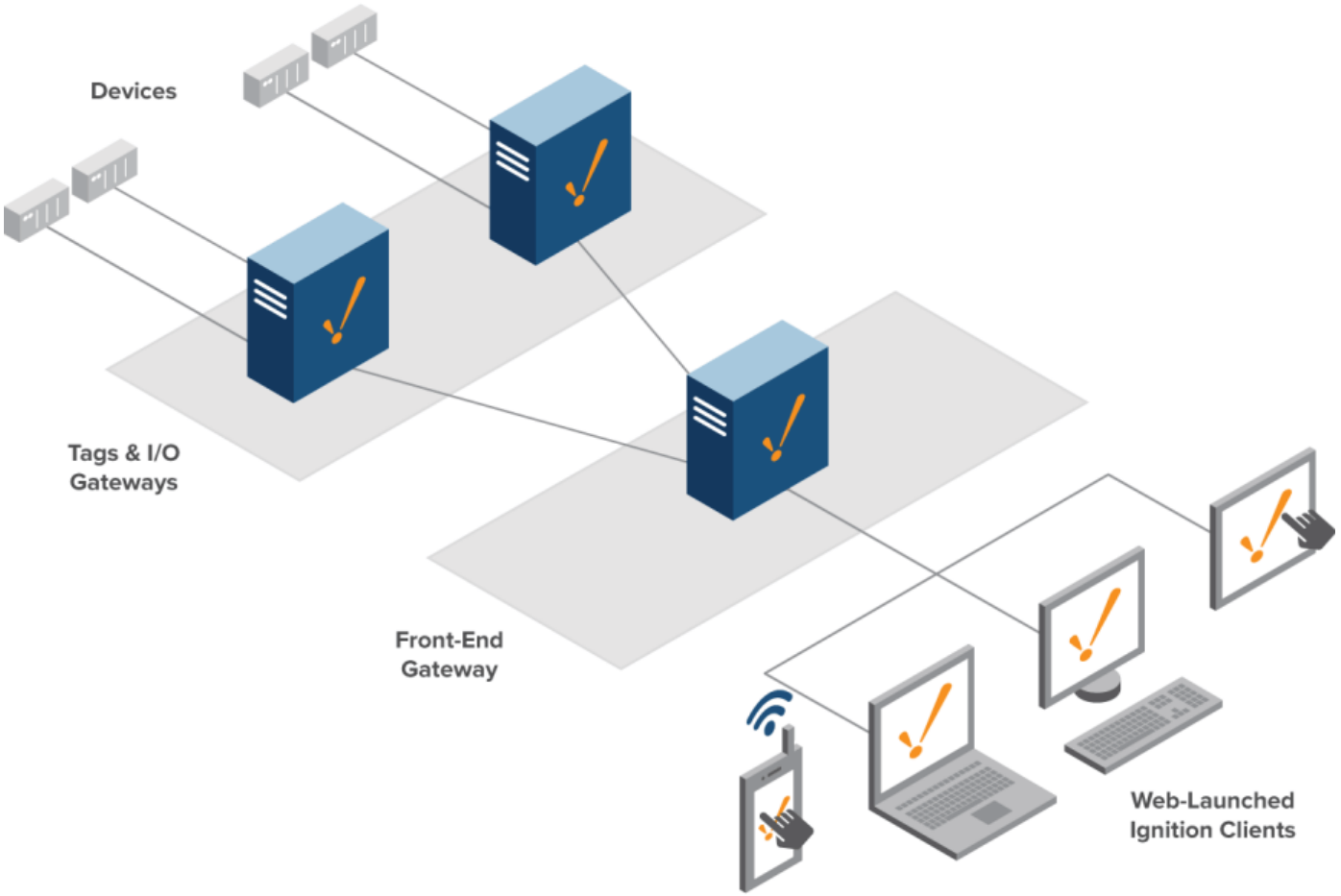


Drag-and-drop visual development

Enterprise integration: Extending the power of InfoSphere Streams

- IBM InfoSphere BigInsights™
- IBM InfoSphere Data Explorer
- IBM InfoSphere DataStage
- Support for XML

Scale-out architecture



Comprehensive tools for an agile development environment

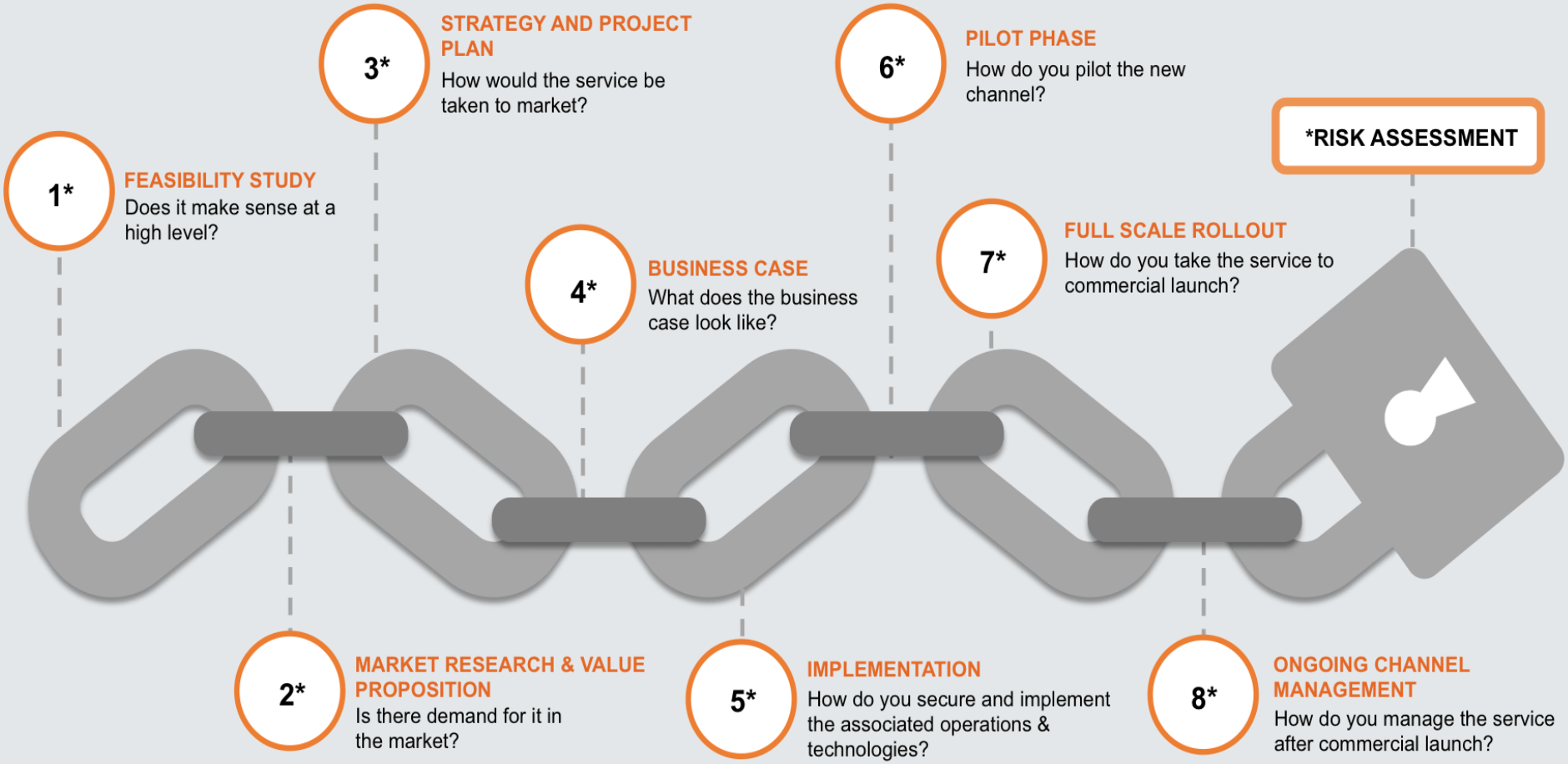
- InfoSphere Streams Debugger
- The drag-and-drop graphical editor
- An instance graph
- The latest InfoSphere Streams data visualization capabilities

Sophisticated analytics with toolkits and accelerators

Sophisticated analytics with toolkits and accelerators

Data Mining Toolkit

Sophisticated analytics with toolkits and accelerators



Financial Services Toolkit

InfoSphere Streams: System requirements

HARDWARE REQUIREMENTS

InfoSphere Streams: System requirements

SOFTWARE REQUIREMENTS

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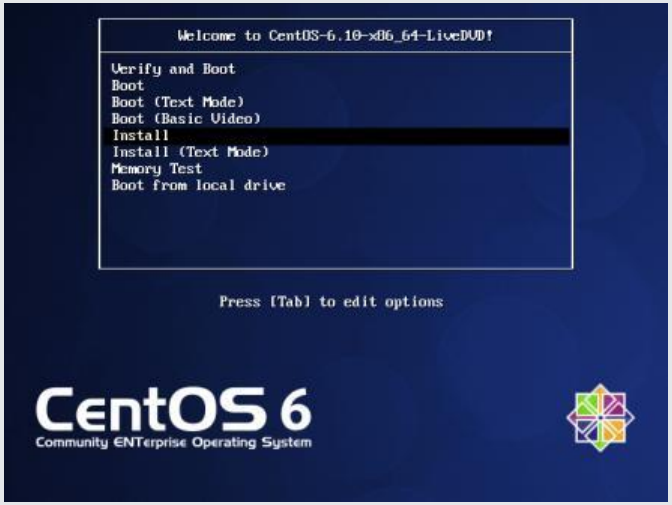
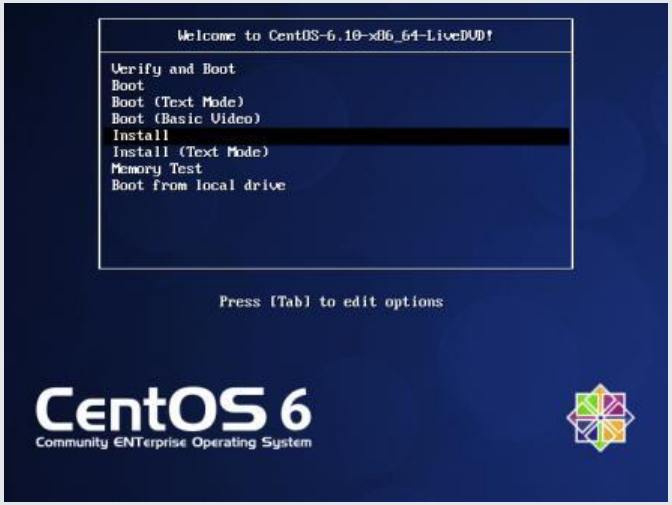
SOFTWARE REQUIREMENTS



InfoSphere Streams: System requirements

SOFTWARE REQUIREMENTS



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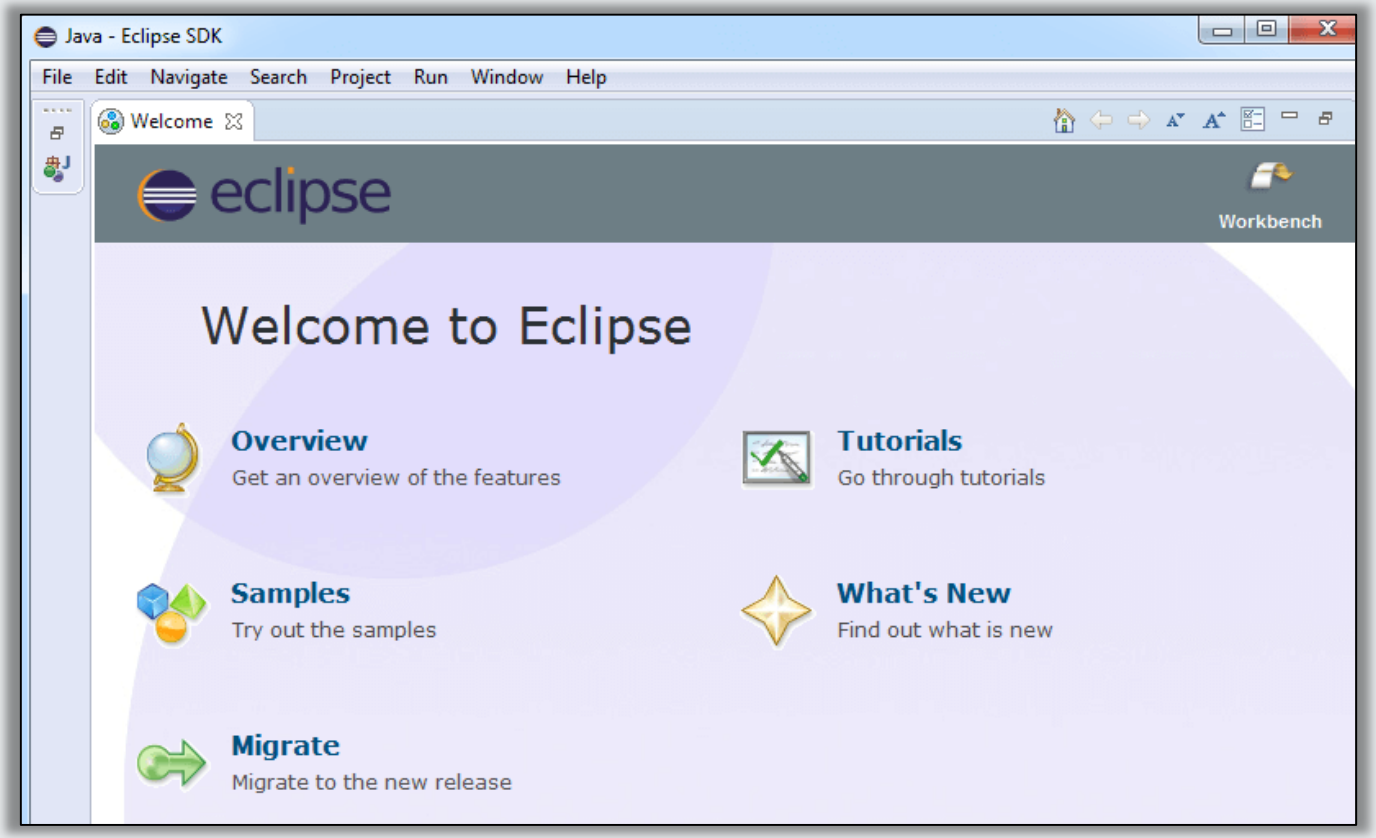

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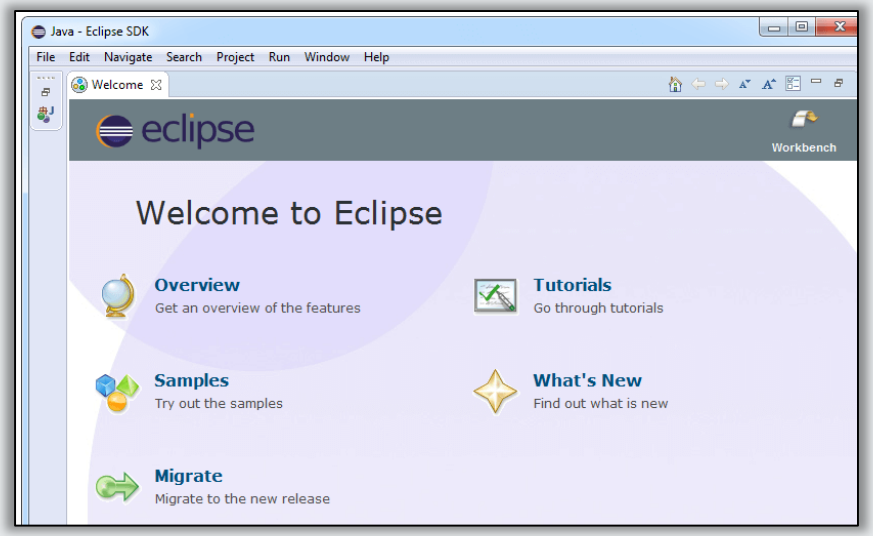

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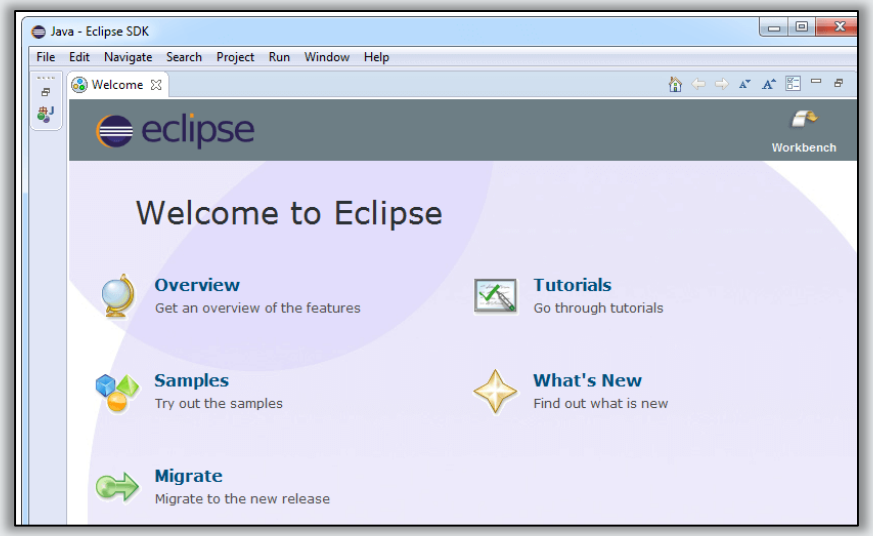

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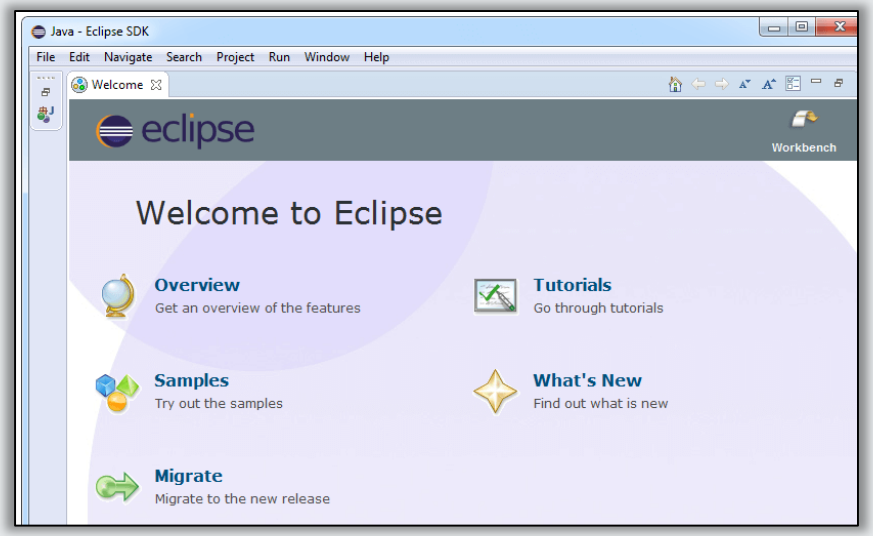

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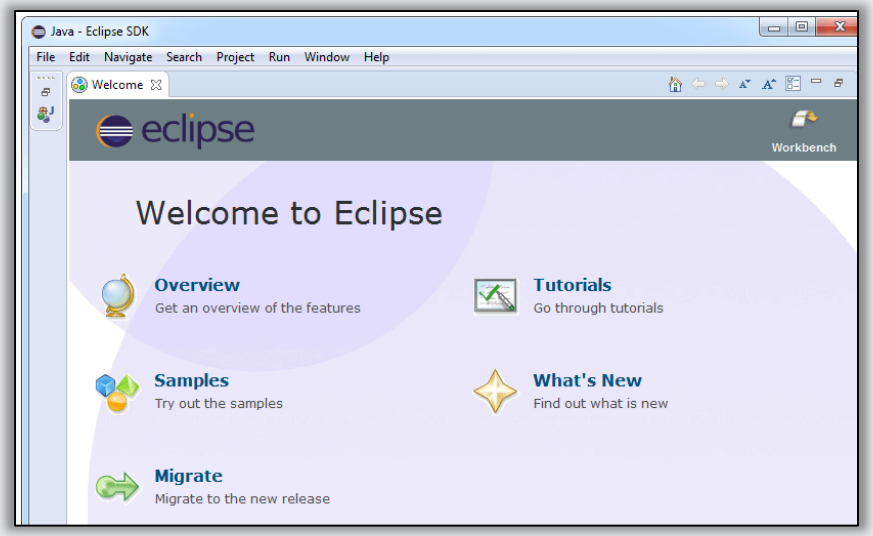

InfoSphere Streams: System requirements

Other toolkits in InfoSphere Streams include

- Complex Event Processing (CEP)
- InfoSphere Data Explorer
- InfoSphere DataStage
- IBM SPSS

Other toolkits in InfoSphere Streams include

- Geospatial
- Messaging
- Time series


That's all for now...