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Crossing the Chasm with Semantic Technology

Marin Dimitrov (CTO)

WaSABi'2014

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- Provides products & solutions for content enrichment and metadata management
- Major clients and industries
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  - Health Care & Life Sciences
  - Cultural Heritage & Digital Libraries
  - Government
  - Recruitment

SEMANTIC TECHNOLOGY – FAD OR FUTURE?

Life Sciences

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Bioinformatics embraces Semantic Web technologies

EMBL-EBI has launched a new Resource Description Framework (RDF) platform. The new platform, built in response to input from industry, provides access to bioinformatics resources that support Semantic Web technologies.

RDF, a standard for web-based data interchange, und profound links between related but differently structu specific relationships between things. RDF makes it po of information produced in life science experiments. Th sharing of data – in this case about molecules – amor a single query to retrieve all relevant data from many different sources.

EMBL-EBI hosts a comprehensive range of freely available molecular databases. Increasin to providing and supporting RDF versions of their data. The RDF platform helps develope data, supporting further integration of applications. Over time, the goal is to create a sea the scientific literature and the data that supports it, spanning genes, expression, protei types.

"Over the next couple of years we will be studying the way researchers in different sector Associate Director Ewan Birney. "That knowledge will shape the role that RDF technologie resources, and we will certainly be paying close attention to the feedback we receive from

The RDF platform currently hosts data from six databases (UniProt, ChEMBL, Expression BioModels) and is available on the EMBL-EBI website: https://www.ebi.ac.uk/rdf/.

News

- Overview
- Press releases
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- Service news

AstraZeneca's view on "Semantics"

Enabling the hyperconnected enterprise

"We need to build a linked data architecture enabling us to ask questions and solve business problems across a heterogeneous information landscape extending beyond the traditional boundaries of the enterprise."

semanticsconnectsusall

AstraZeneca

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Cultural Heritage

semanticweb.com™ The Voice of Semantic Technology Business: Big Data, Linked Data, Smart Data

LINKED DATA

The Importance of the Semantic Web To Our Cultural Heritage

By Jennifer Zaino on May 20, 2014 9:00 AM

Earlier this year The Semantic Web Blog reported that the Getty Research Institute has released the Art & Architecture Thesaurus (AAT) as Linked Open Data. One of the external advisors to its work was Vladimir Alexiev, who leads the Data and Ontology Management group at Ontotext and works on many projects related to cultural heritage.

Ontotext's OWLIM family of semantic repositories supports large-scale knowledge bases of rich semantic information, and powerful reasoning. The company, for example, did the first working implementation of CIDOC CRM search; CIDOC CRM is one of these rich ontologies for cultural heritage.

We caught up with Alexiev recently to gain some insight into semantic technology's role in representing the cultural heritage sphere. Here are some of his thoughts about why it's important

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Linked Data: Connecting together the BBC's Online Content

Tuesday 19 February 2013, 09:31

Oliver Bartlett
Product Manager

COMMENTS (11)

Tagged with: Linked Data, BBC News

Hi I'm Oli Bartlett, product manager for the BBC's Linked Data Platform.

The Linked Data Platform is one of the legacies of the BBC Sport **2012 Olympic** have read my **blog post** on the work we did for the **Olympic Data Service**.

One aspect of the service delivered the semantic framework for the 10,000 athle event, discipline, country and venue.

This framework provides the semantic graph of data (the **linked data** containing venues and their associations with each other) and the **API**s on this data.

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Linked Data: new ontologies website

Wednesday 30 April 2014, 10:05

Sofia Angeletou
Data Architect

COMMENTS (6)

Share

Tagged with: BBC Online, Linked Data

Hello, I'm Sofia Angeletou and I'm the Data Architect for the Linked Data Platform (LDP), which builds the BBC's services for creating and publishing linked data.

I'm going to talk to you about our new **/ontologies** site which we released last week and where you can find the **ontologies** that BBC uses to support **BBC Sport, Education**, news prototypes and soon BBC **Music** and Radio programmes.

What is it and why are we doing it?

Oli Bartlett, the owner of the Linked Data Platform, has **explained** how we have expanded the reach of linked data within the BBC to more audience facing products and presented our ambitions to using linked data as glue for the plethora of content the BBC produces. As a direct result of this, more models are being built to support additional functionality and cover new and diverse domains of interest.

bbc.co.uk/ontologies is a human friendly view of the data models in the Linked Data Platform and is meant to give a comprehensive understanding of which ontologies the BBC uses, why and how. This is provided for members of the public and anyone who wants to get a better understanding of the BBC's Linked Data.

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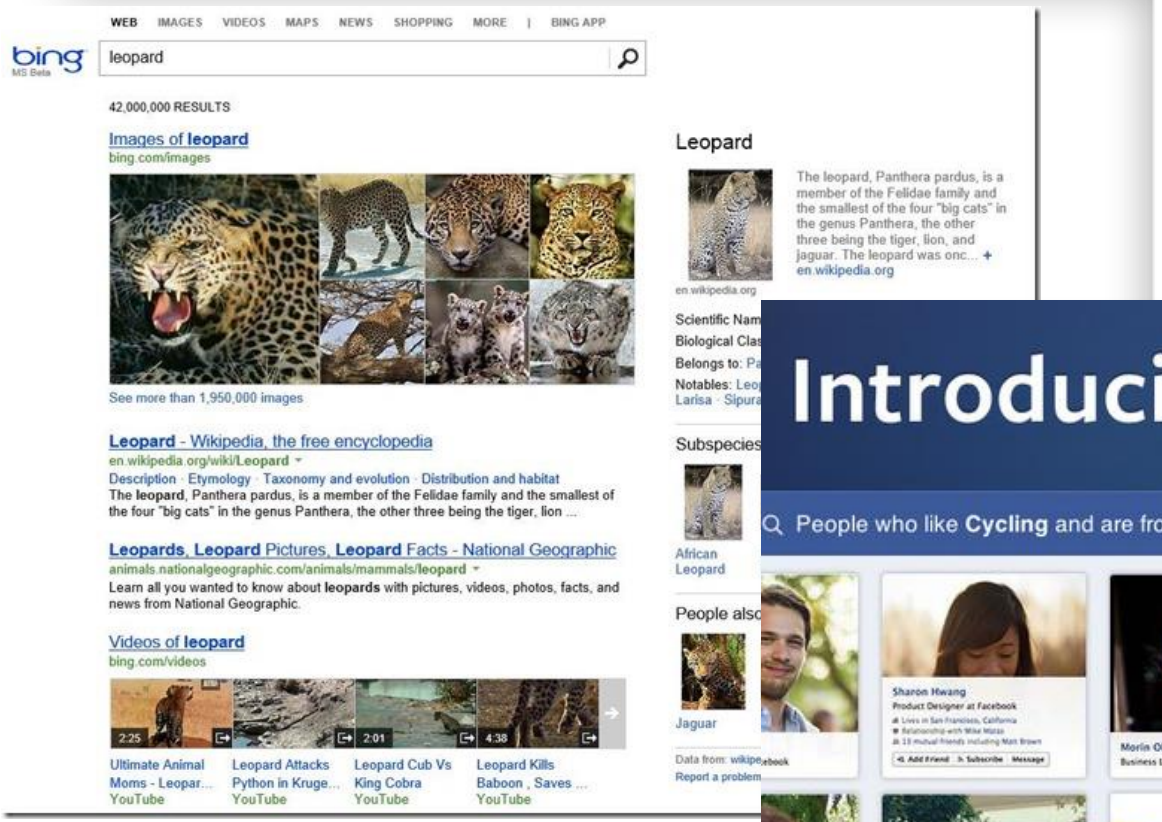
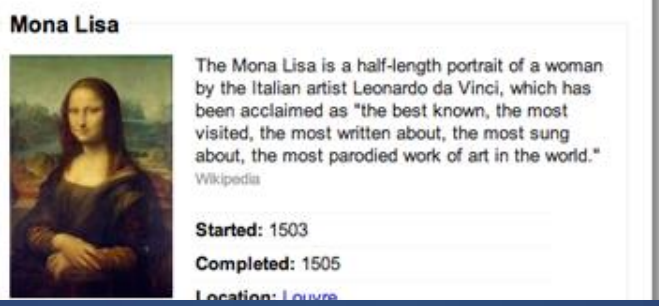
Knowledge Graphs





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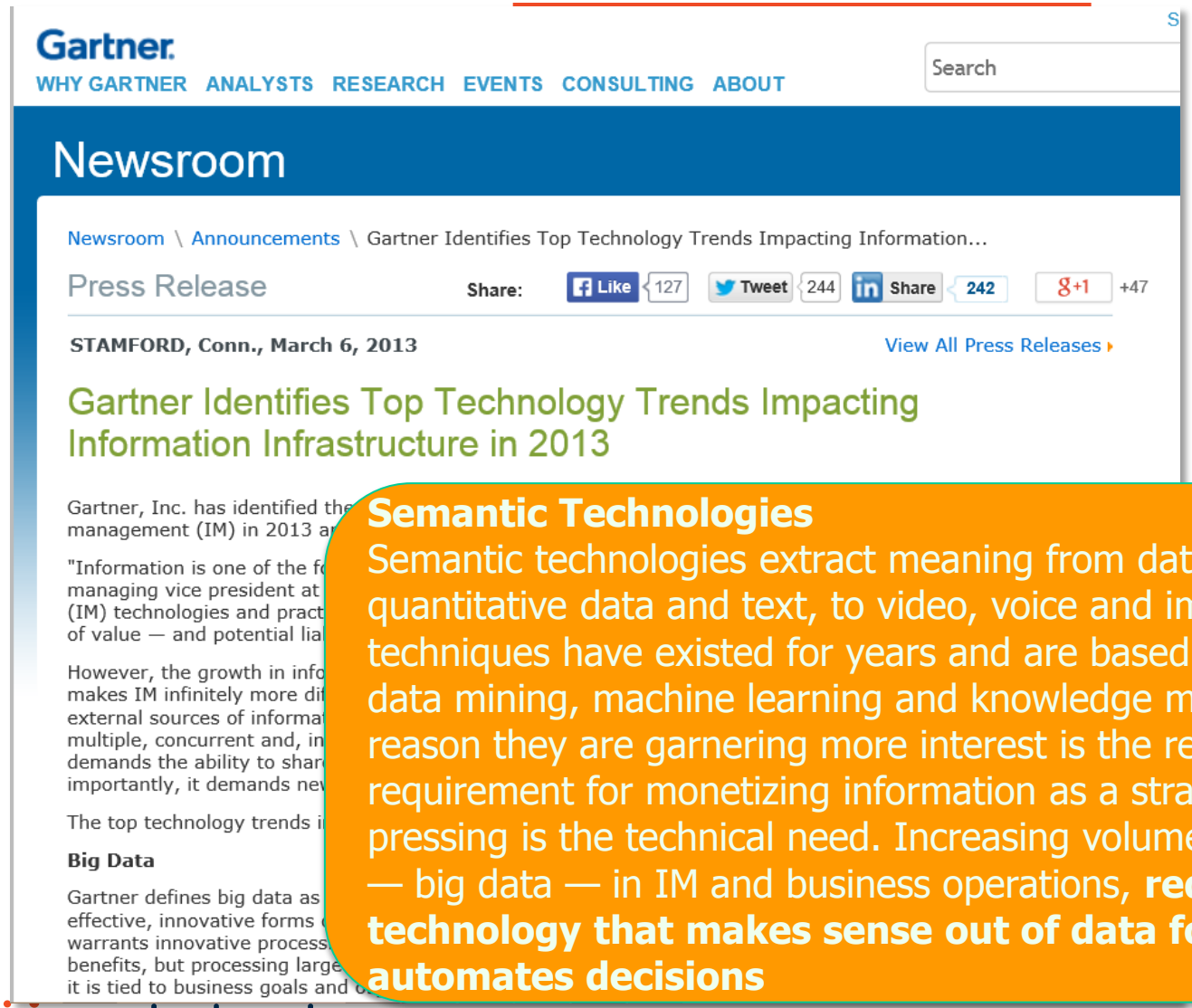
Crossing the Chasm

Top Information Management Trends 2013 (Gartner)



Gartner

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Press Release

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STAMFORD, Conn., March 6, 2013

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Gartner Identifies Top Technology Trends Impacting Information Infrastructure in 2013

Gartner, Inc. has identified the
management (IM) in 2013 a

"Information is one of the f
managing vice president at
(IM) technologies and pract
of value — and potential lia

However, the growth in info
makes IM infinitely more di
external sources of informa
multiple, concurrent and, in
demands the ability to shar
importantly, it demands ne

The top technology trends i

Big Data

Gartner defines big data as
effective, innovative forms
warrants innovative process
benefits, but processing large
it is tied to business goals and

Semantic Technologies

Semantic technologies extract meaning from data, ranging from quantitative data and text, to video, voice and images. Many of these techniques have existed for years and are based on advanced statistics, data mining, machine learning and knowledge management. One reason they are garnering more interest is the renewed business requirement for monetizing information as a strategic asset. Even more pressing is the technical need. Increasing volumes, variety and velocity — big data — in IM and business operations, **requires semantic technology that makes sense out of data for humans, or automates decisions**

A Different Point of View

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COMMENTARY

1/7/2014
09:06 AM

Seth Grimes
Commentary

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17 COMMENTS
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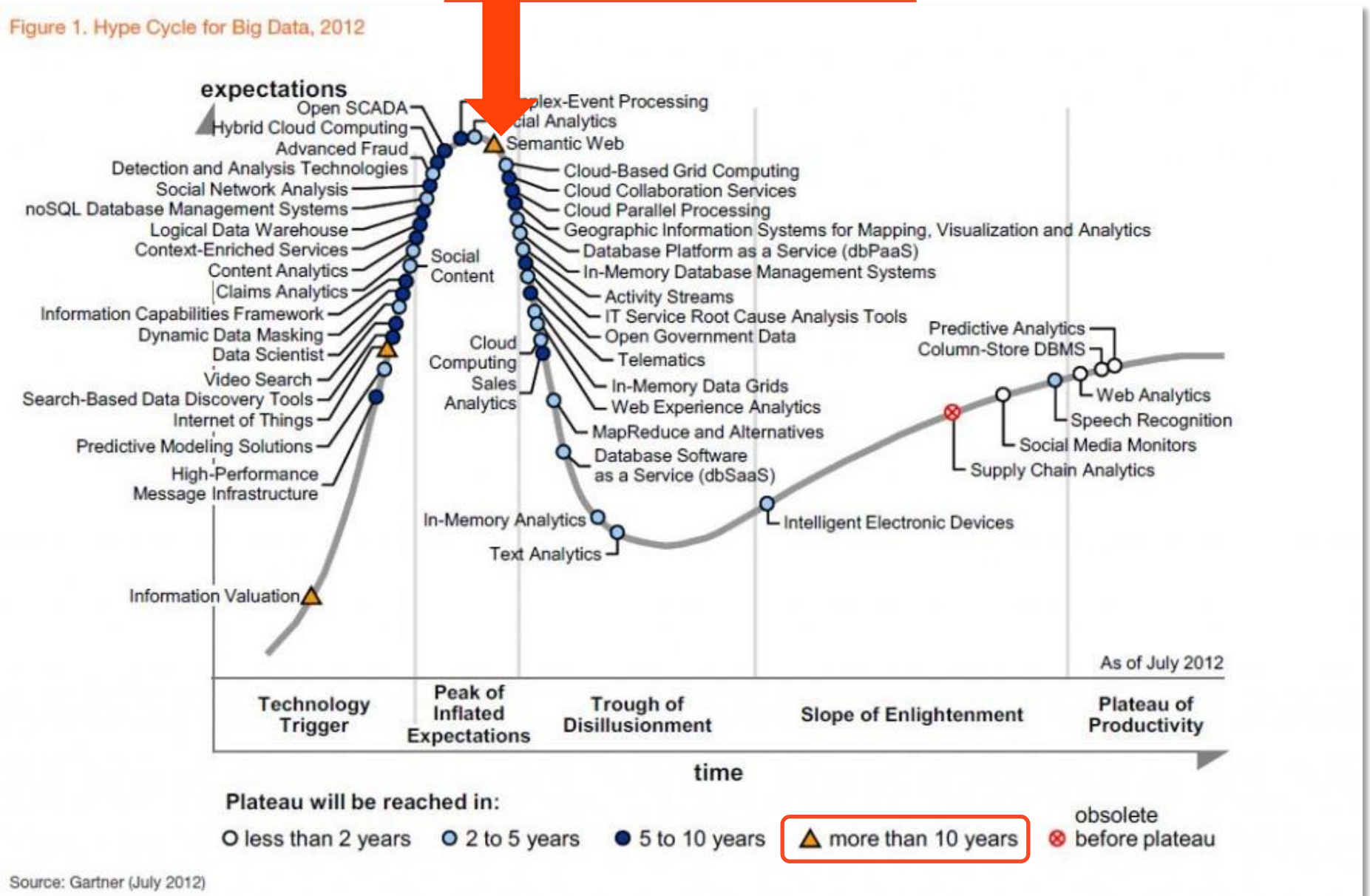
Semantic Web Business: Going Nowhere Slowly

The semantic web vision persists, but the tools and processes don't stand up to today's data chaos.

I've been a semantic web skeptic for years. SemWeb is a narrowly purposed replica of a subset of the World Wide Web. It's useful for information enrichment in certain domains, via a circumscribed set of tools. However, the SemWeb offers a vanishingly small benefit to the vast majority of businesses. The vision persists but is unachievable; the business reality of SemWeb is going pretty much nowhere.

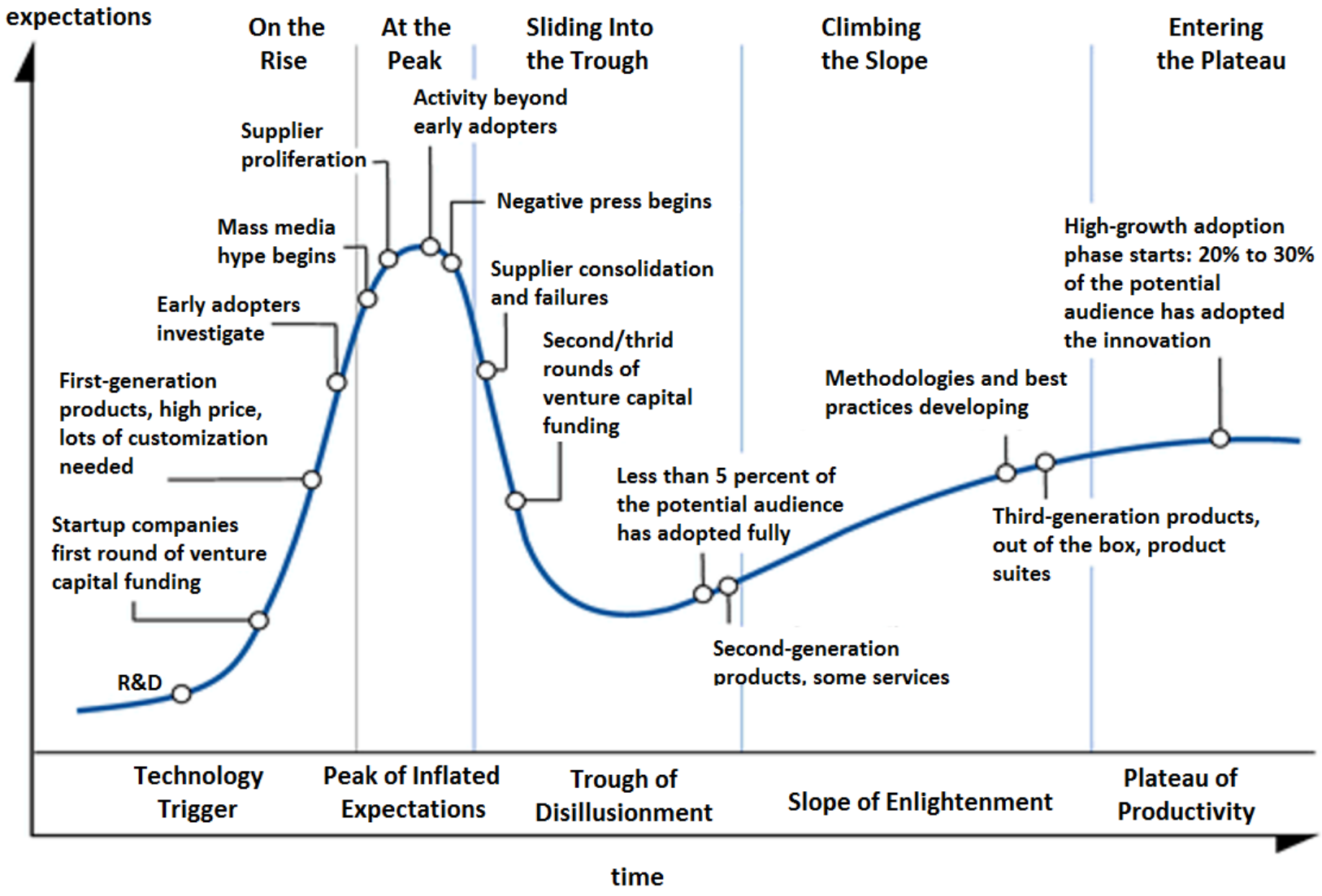
The SemWeb dream centers on sharing linked data via the W3C's Resource Description Framework protocol. There is no question that SemWeb aspires to a worthy goal, but its tools and processes are no match for the reality of never-diminishing online, social, and enterprise data chaos. SemWeb can't keep up with the flow, even on the limited portion of the data universe that is published on the World Wide Web. We will never achieve its ideal universe of

Big Data Hype Cycle 2012 (Gartner)

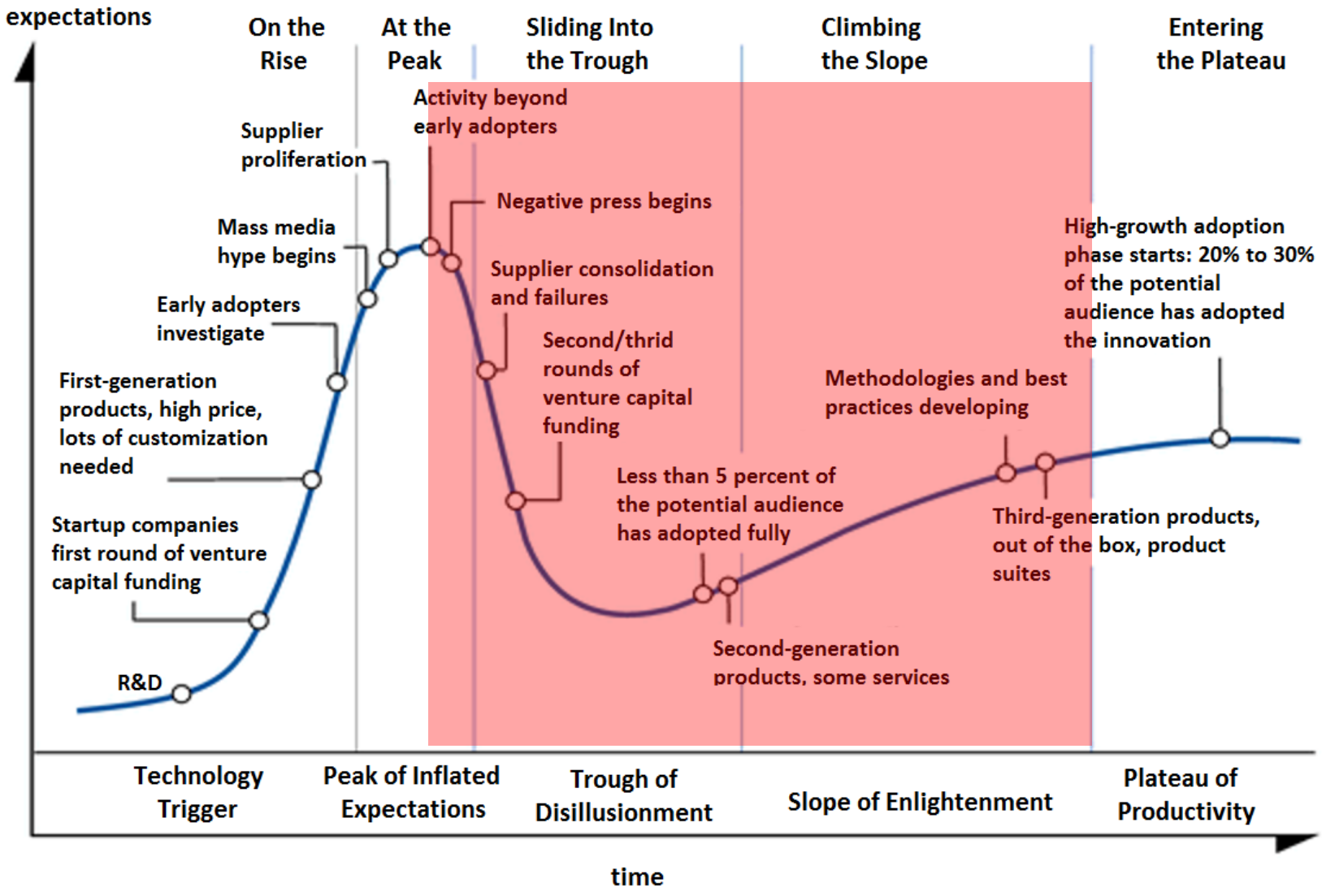


INNOVATION, HYPE & CHASM

Technology Hype Cycle (Gartner)



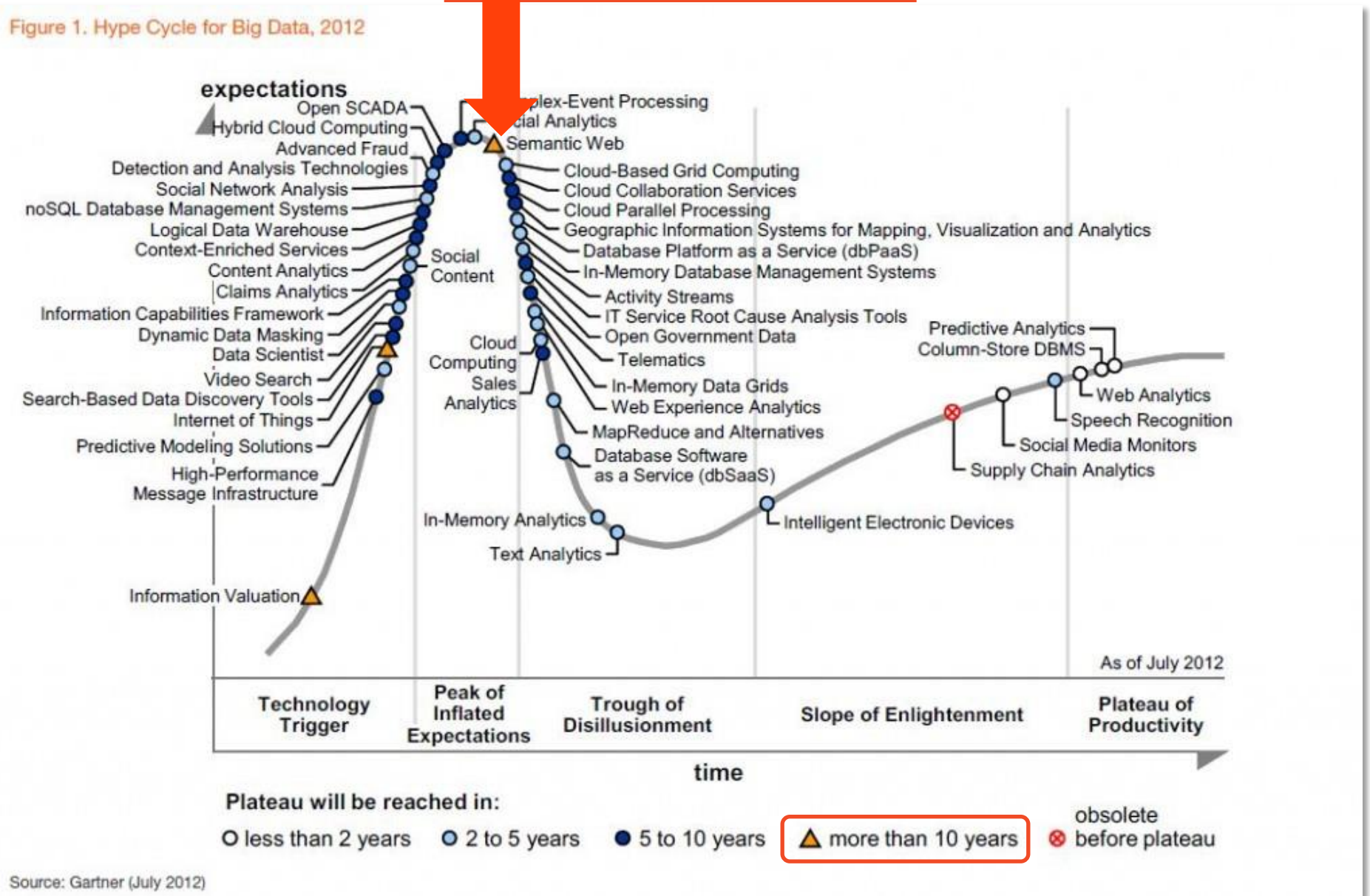
Time-to-value Gap (Gartner)



Time-to-value Gap (Gartner)

- **Performance**
  - Consistent reliability, availability, quality
- **Integration**
  - Innovation must fit into existing environments & constraints
- **Penetration**
  - Critical mass of adopters required
- **Payback**
  - Deriving business values, cost savings, ROI
  - *Amounts* and/or *timing* usually difficult to estimate

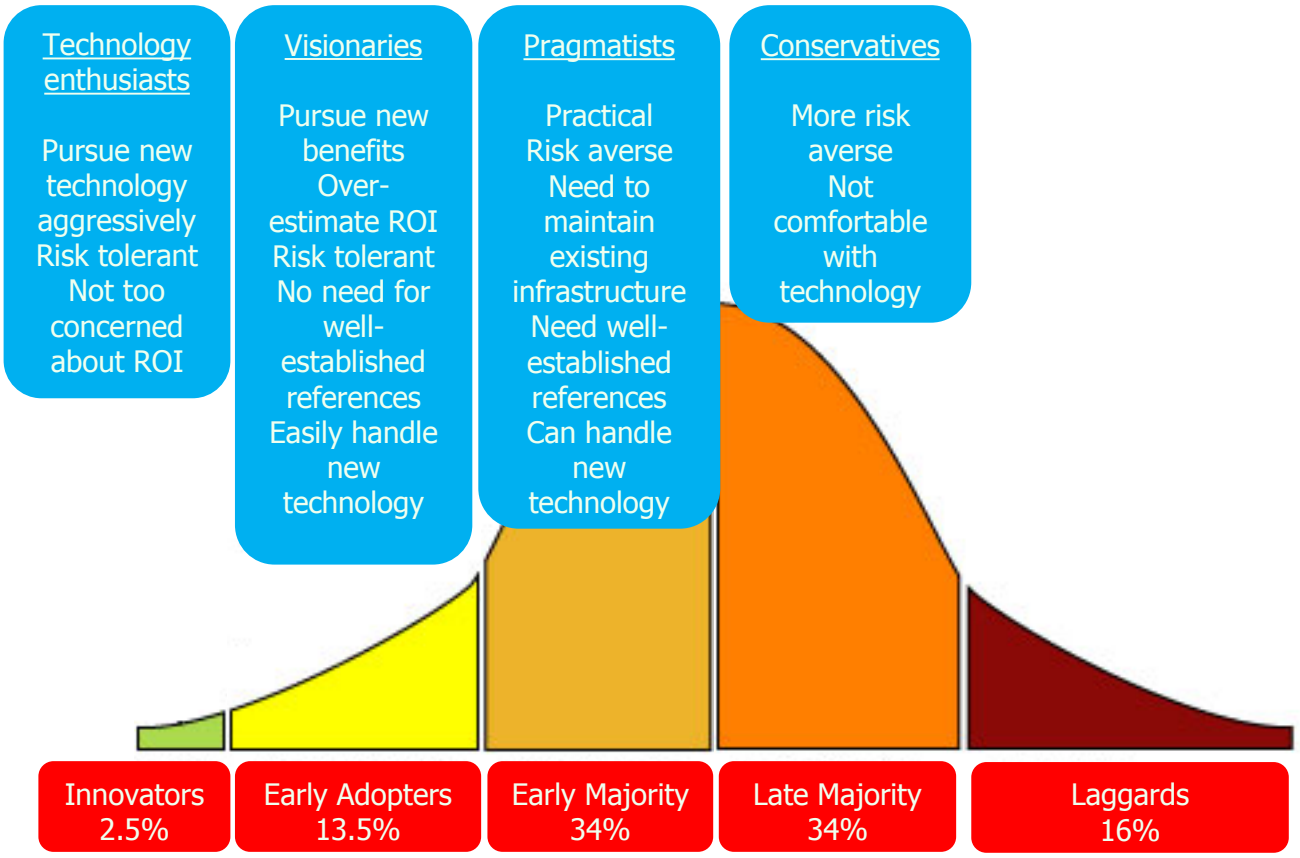
Big Data Hype Cycle 2012 (Gartner)



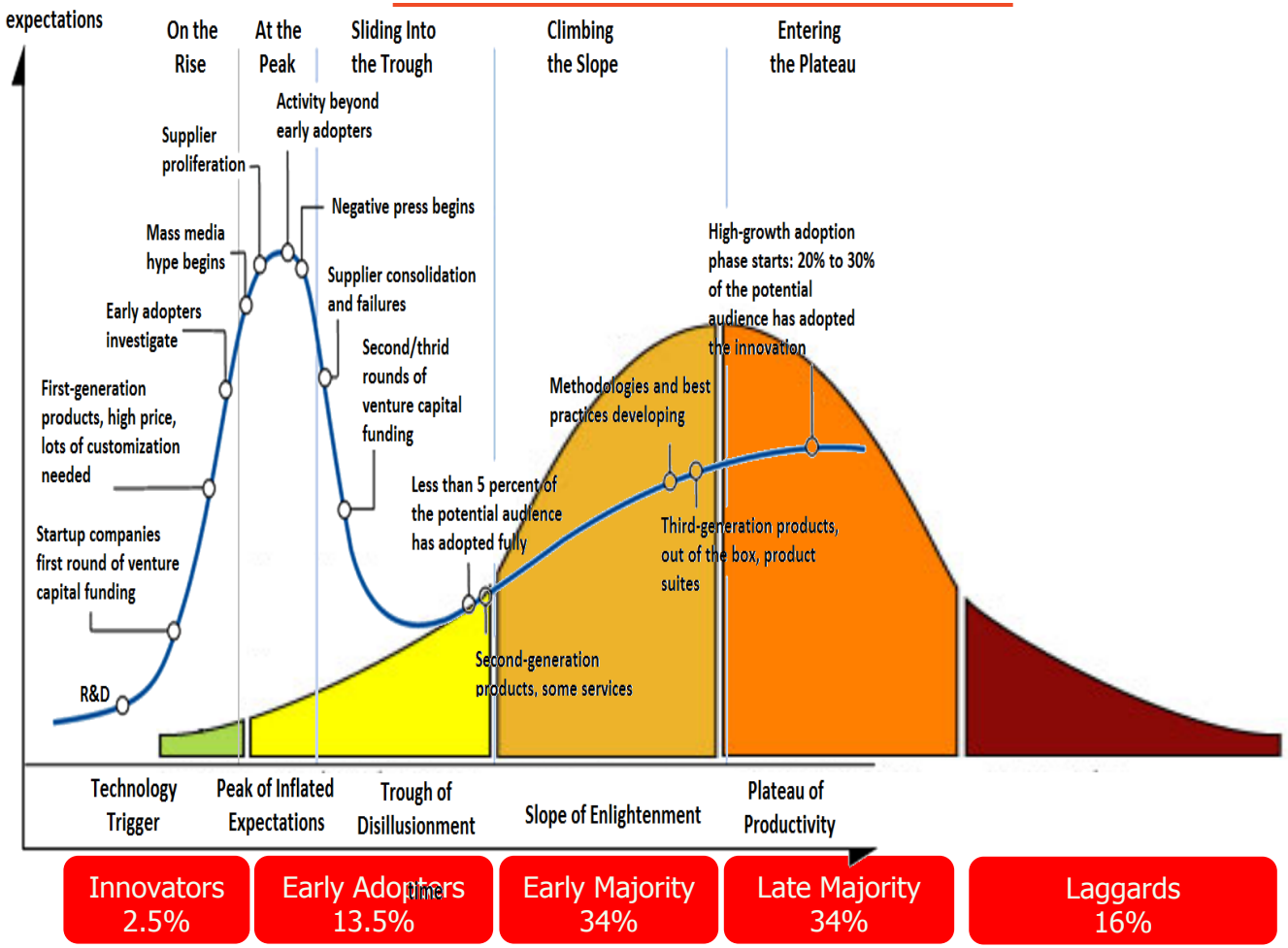
Semantic Technologies on the Hype Cycles 2013 (Gartner)

- Hype cycles for Web Computing, Information Infrastructure, Enterprise Information management, etc.
- Related technologies
  - Graph databases, Semantic Web, metadata management, content/text analytics, taxonomy & ontology management, entity resolution & analysis
  - Positioned in the early phases: on the rise / at the peak / sliding into the trough

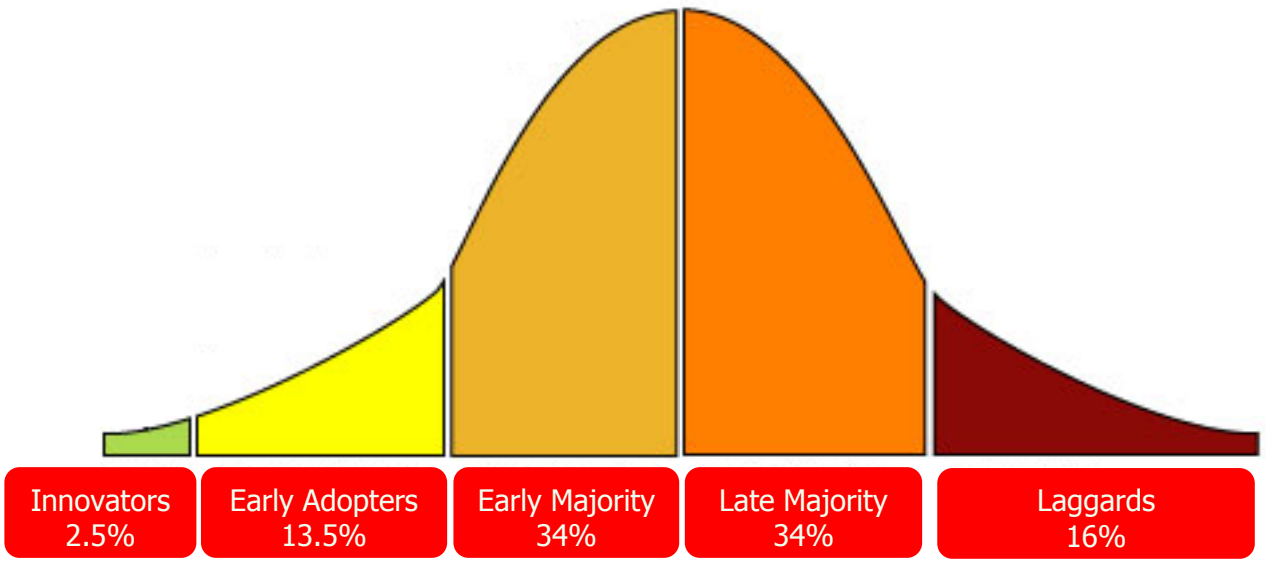
Technology Adoption Lifecycle



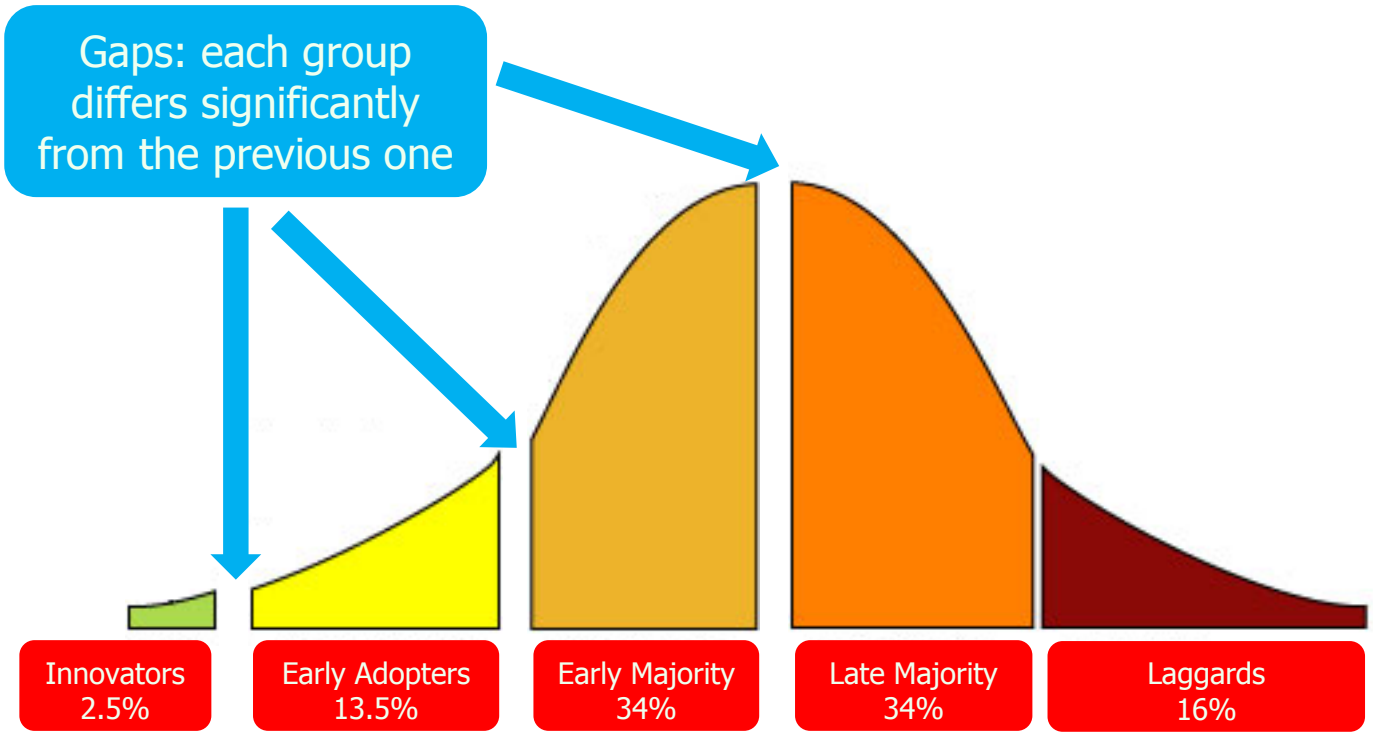
Technology Adoption Lifecycle & Gartner Hype Cycle



Gaps in the Technology Adoption Lifecycle



The Chasm (Geoffrey Moore)



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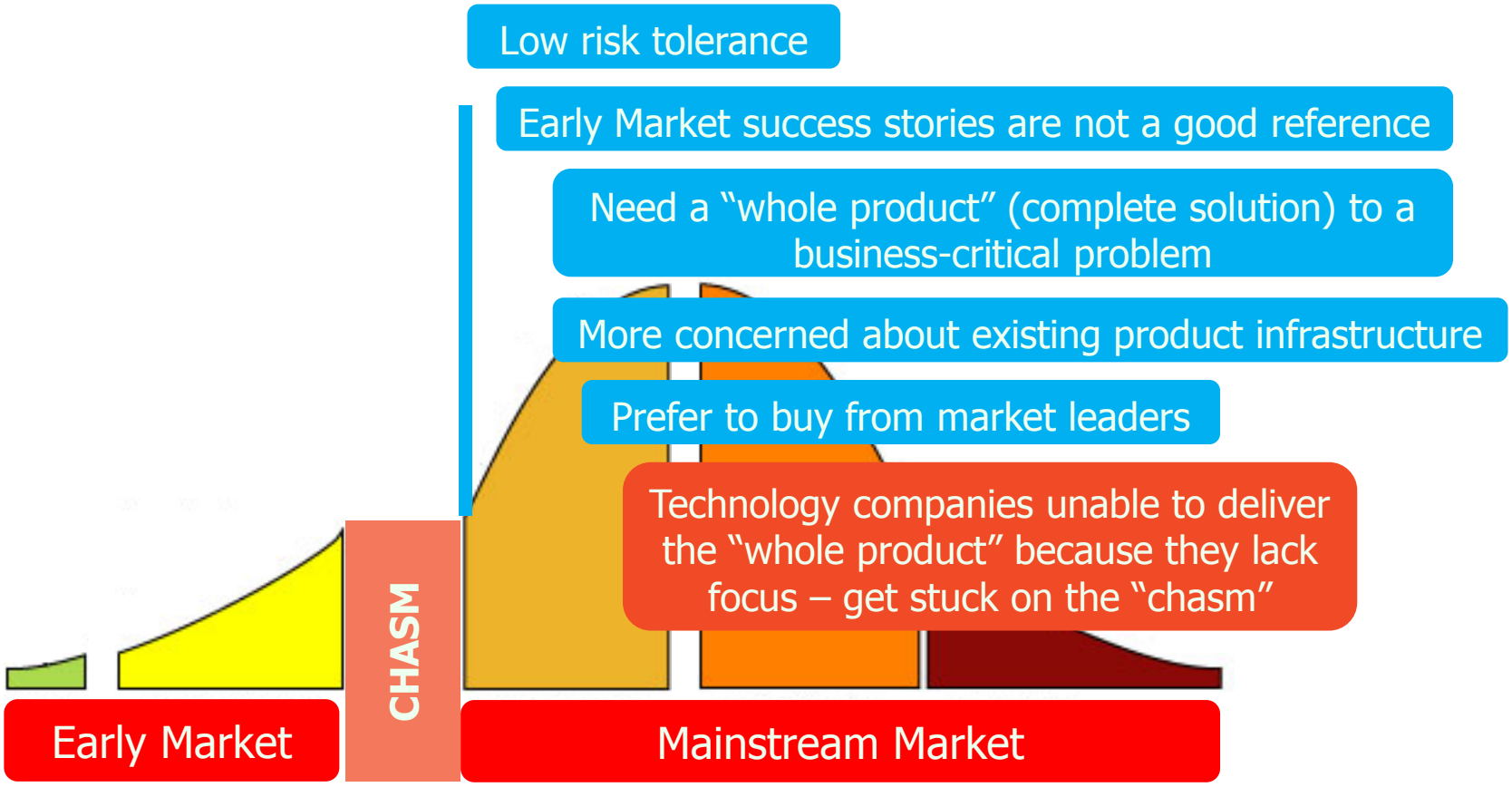
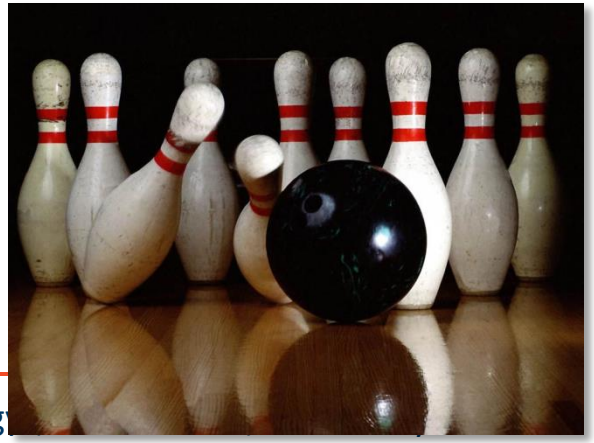
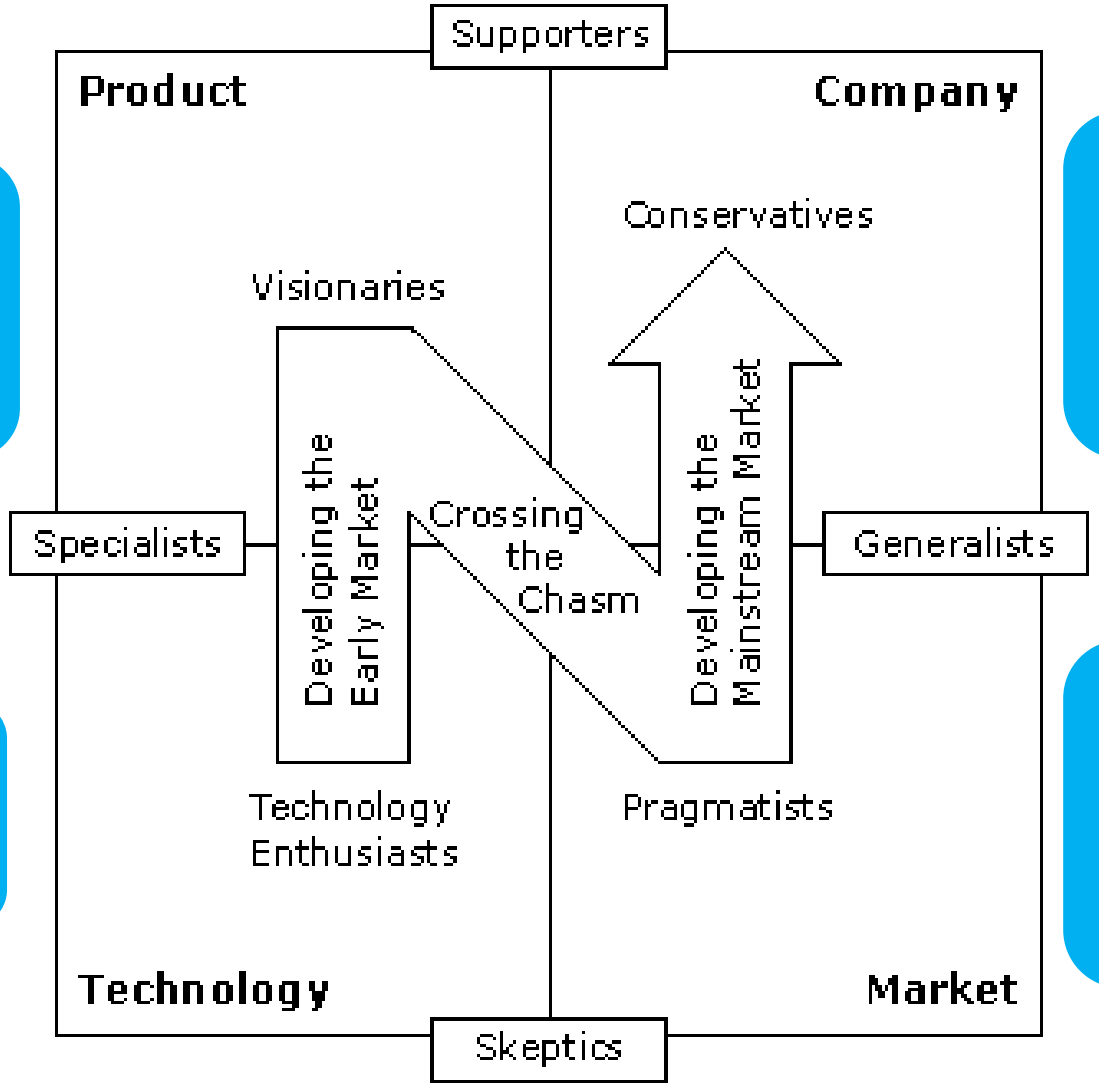


Crossing The Chasm (Geoffrey Moore)

- Identify one attractive mainstream market customer (niche)
- Focus on providing the "whole product" for their problem
  - Partnerships with other providers may be required
  - A reference "success story" for other mainstream buyers
- Become the market leader in the niche & move into adjacent niches
  - Bowling alley effect



The Competitive-Positioning Compass (Geoffrey Moore)



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Guru endorsement

Market share
Standards & certification
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Industry analyst endorsements

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LESSONS LEARNED

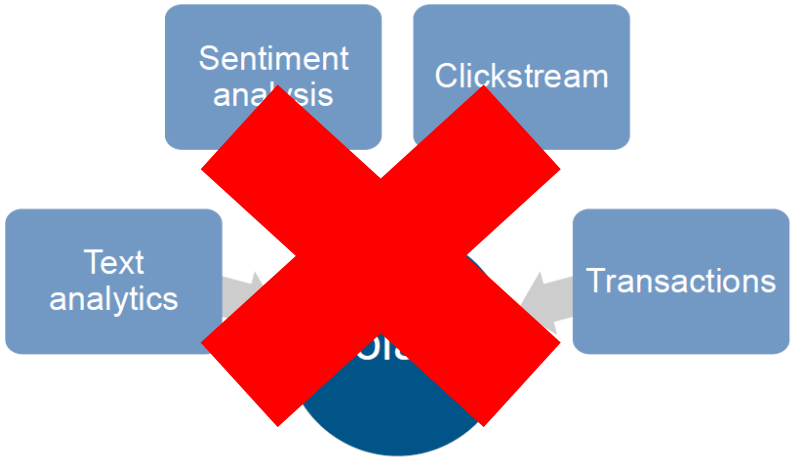
Lessons Learned

- Innovations go through ups and downs before reaching the productivity phase
  - Customer: experimentation and patience often required before value is delivered
  - Customer: TCO often higher than expected
  - Provider: target the value gaps early: *Performance, Integration, Penetration, Payback*
- Understand the technology adoption challenges
  - Early market success *does not* translate to mainstream market success
  - Different strategies for delivering value to Enthusiasts, Visionaries, Pragmatists & Conservatives

Lessons Learned

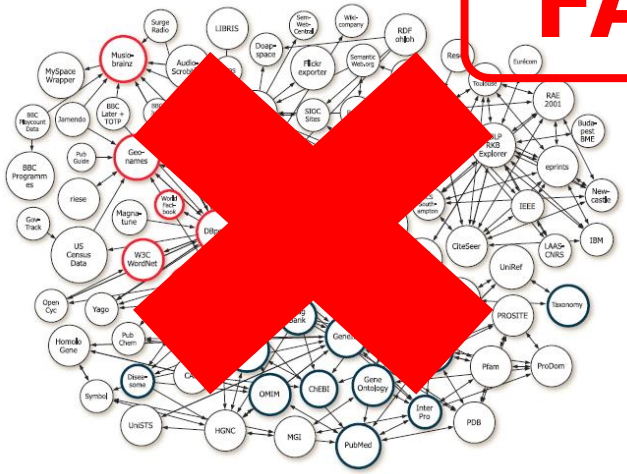
- Follow the “chasm crossing” principles
  - Focus on an attractive mainstream customer / niche
  - Find partners & deliver the “whole product” (complete solution) that solves a business-critical problem
  - Use the success story as a 1st reference point
  - Move into adjacent niches (bowling alley effect)
- Clearly convey the benefits of your solution
  - *Not* via a product feature list or benchmarks
  - Speak the language of the customer
  - How is your solution better than the current one?
  - Measurable returns and timeframe for achieving them

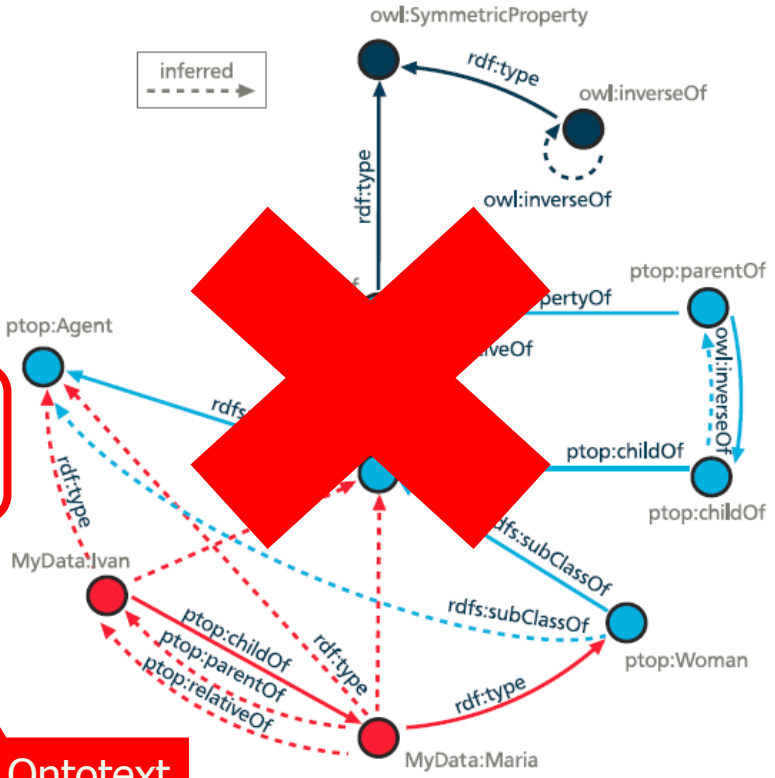
Clearly Convey the Benefits of Your Solution



Gartner

FAIL

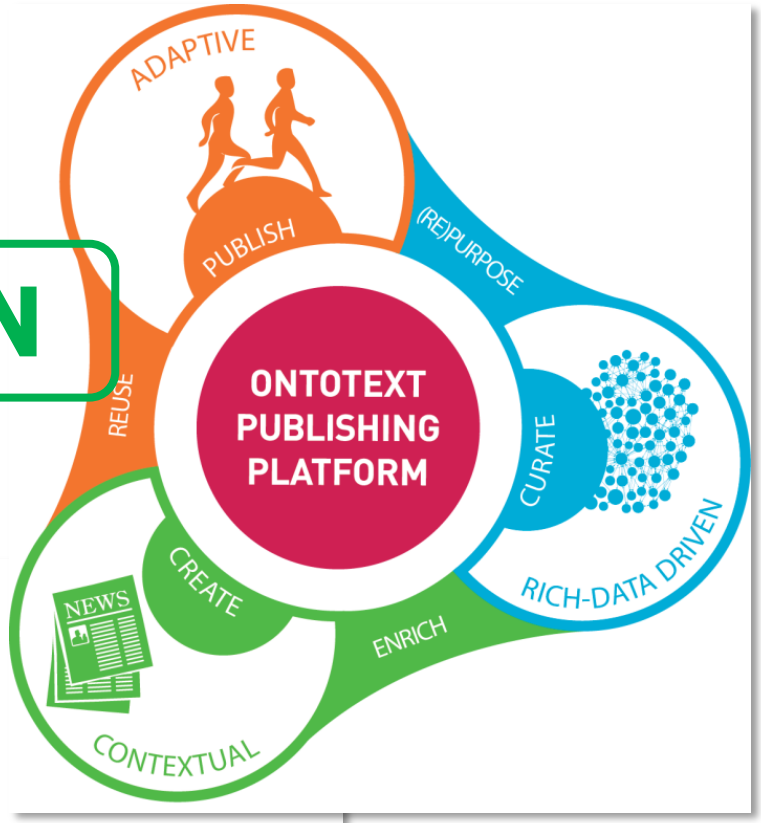




Ontotext brochure 2012

Clearly Convey the Benefits of Your Solution

WIN



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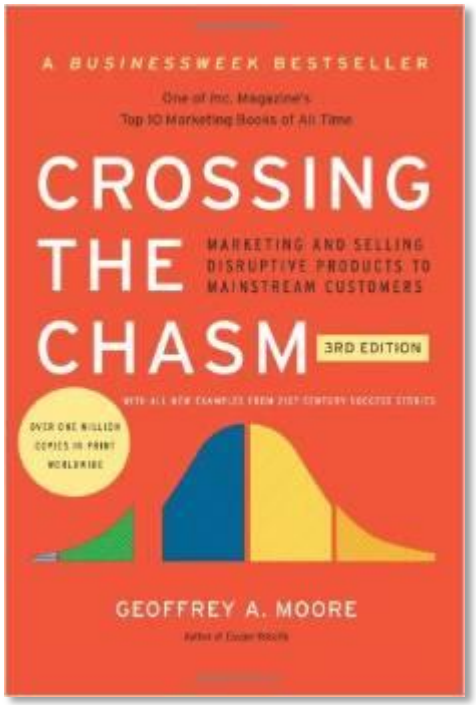

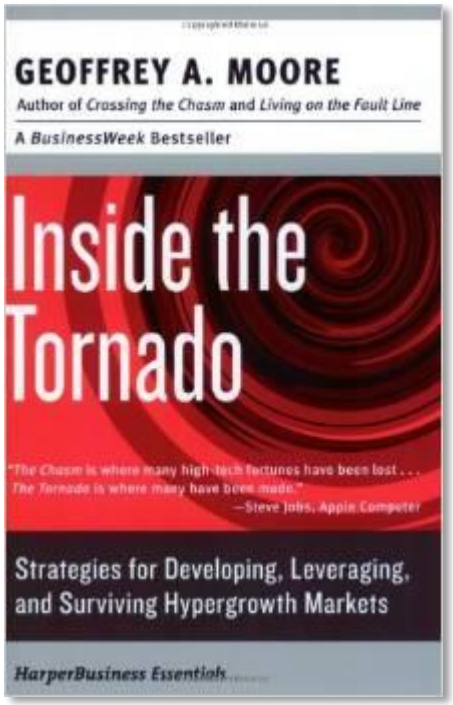

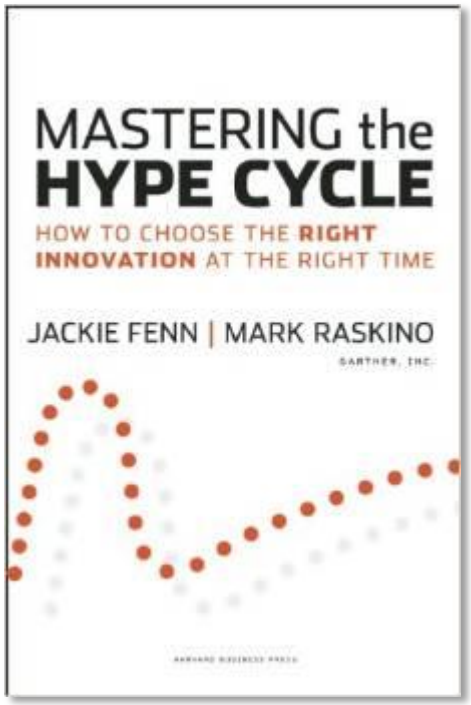

Q & A

Thank you!