Gartner 2005 Hype Cycle for Emerging Technologies

visibility

Biometric Identity Documents
BPM Suites
P2P VoIP
Desktop Search
Inkjet Manufacturing
Electronic Ink/Digital Paper
Linux on Desktop for Mainstream Business Users
Micro Fuel Cells
Model-Driven Approaches
Carbon Nanotubes
Podcasting
Really Simple Syndication
Internal Web Services
Text Mining
Grid Computing
Biometric User Identification
Speech Recognition for Telephony and Call Center
Augmented Reality
Corporate Blogging
Business Process Networks
802.16 2004 WiMAX
Wikis
Organic Light-Emitting Devices
Text-to-Speech/ Speech Synthesis
Corporate Semantic Web
Mesh Networks — Sensor
VoIP
Web-Services-Enabled Business Models
Business Rule Engines
4G
Trusted Computing Group
Location-Aware Applications
Software as Service/ASP
SOA
Handwriting Recognition
Prediction Markets
Networked Collective Intelligence
Videoconferencing
RFID (Passive)
Quantum Computing
XBRL
DNA Logic
Tablet PC
Internet Micropayments

As of August 2005

| Technology Trigger | Peak of Inflated Expectations | Trough of Disillusionment | Slope of Enlightenment | Plateau of Productivity |

maturity

Plateau will be reached in:

O less than 2 years   O 2 to 5 years   ● 5 to 10 years   ▲ more than 10 years   obsolete ⊗ before plateau

Acronym Key

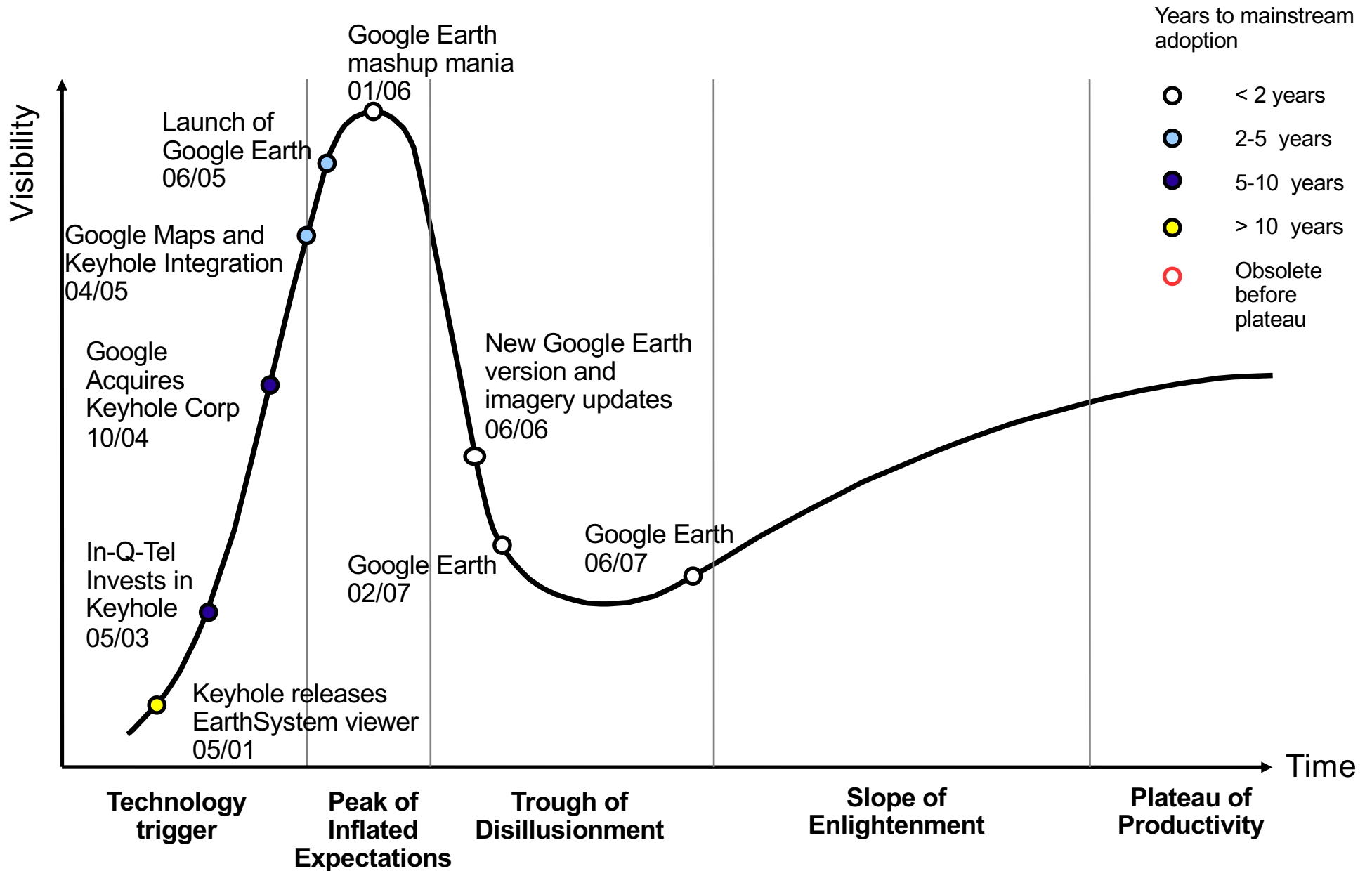|			
4G	fourth generation	SOA	service-oriented architecture
ASP	application service provider	VoIP	voice over Internet Protocol
BPM	business process management	WiMAX	Worldwide Interoperability for Microwave Access
P2P	peer to peer	XBRL	Extensible Business Reporting Language
RFID	radio frequency identification		

Hype Cycles Phases

- **"Technology Trigger"**
  - The first phase of a Hype Cycle is the "technology trigger" or breakthrough, product launch or other event that generates significant press and interest.
- **"Peak of Inflated Expectations"**
  - In the next phase, a frenzy of publicity typically generates over-enthusiasm and unrealistic expectations. There may be some successful applications of a technology, but there are typically more failures.
- **"Trough of Disillusionment"**
  - Technologies enter the "trough of disillusionment" because they fail to meet expectations and quickly become unfashionable. Consequently, the press usually abandons the topic and the technology.
  - Less visibility. More users.
- **"Slope of Enlightenment"**
  - Although the press may have stopped covering the technology, some businesses continue through the "slope of enlightenment" and experiment to understand the benefits and practical application of the technology.
- **"Plateau of Productivity"**
  - A technology reaches the "plateau of productivity" as the benefits of it become widely demonstrated and accepted. The technology becomes increasingly stable and evolves in second and third generations. The final height of the plateau varies according to whether the technology is broadly applicable or benefits only a niche market
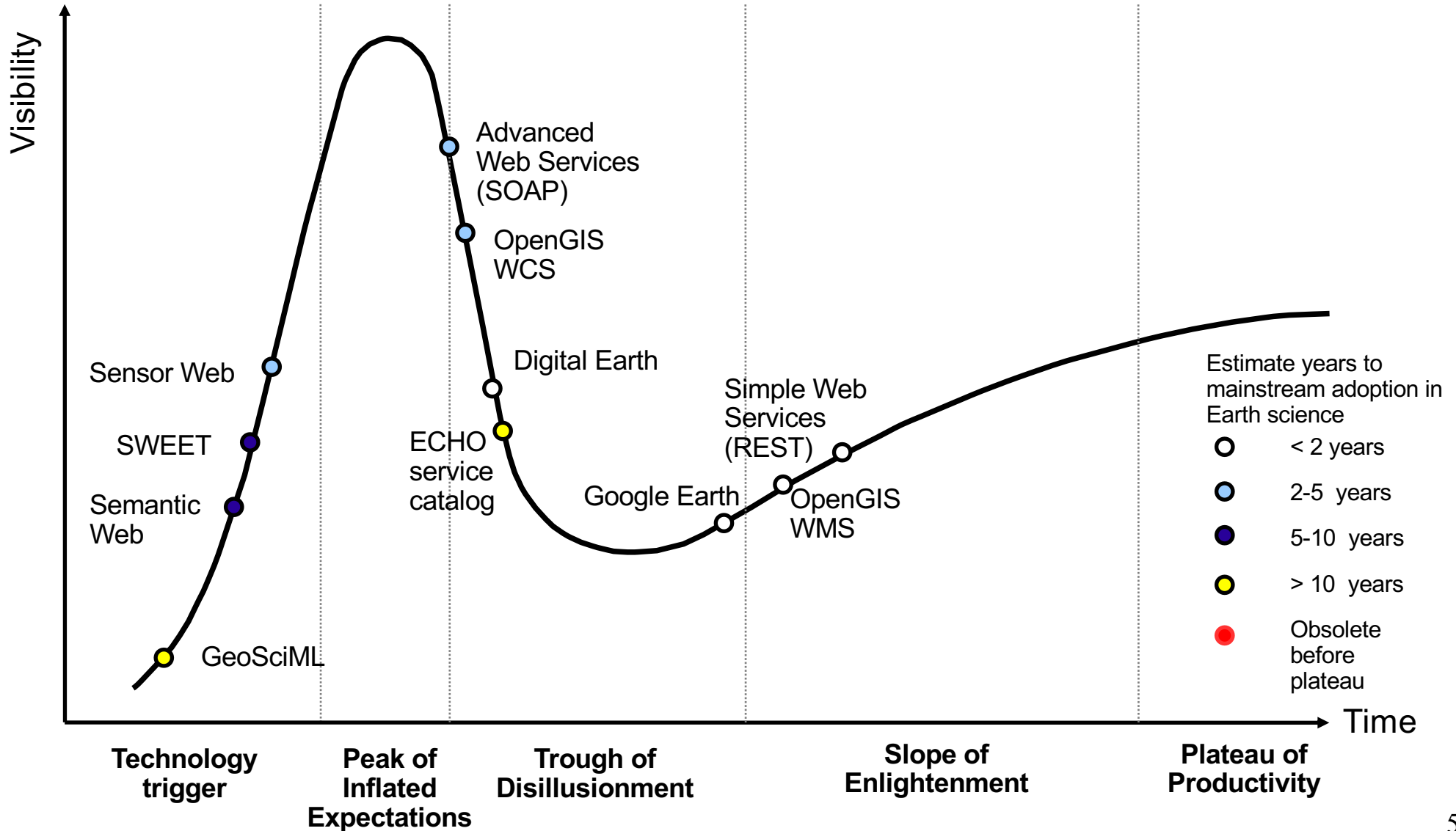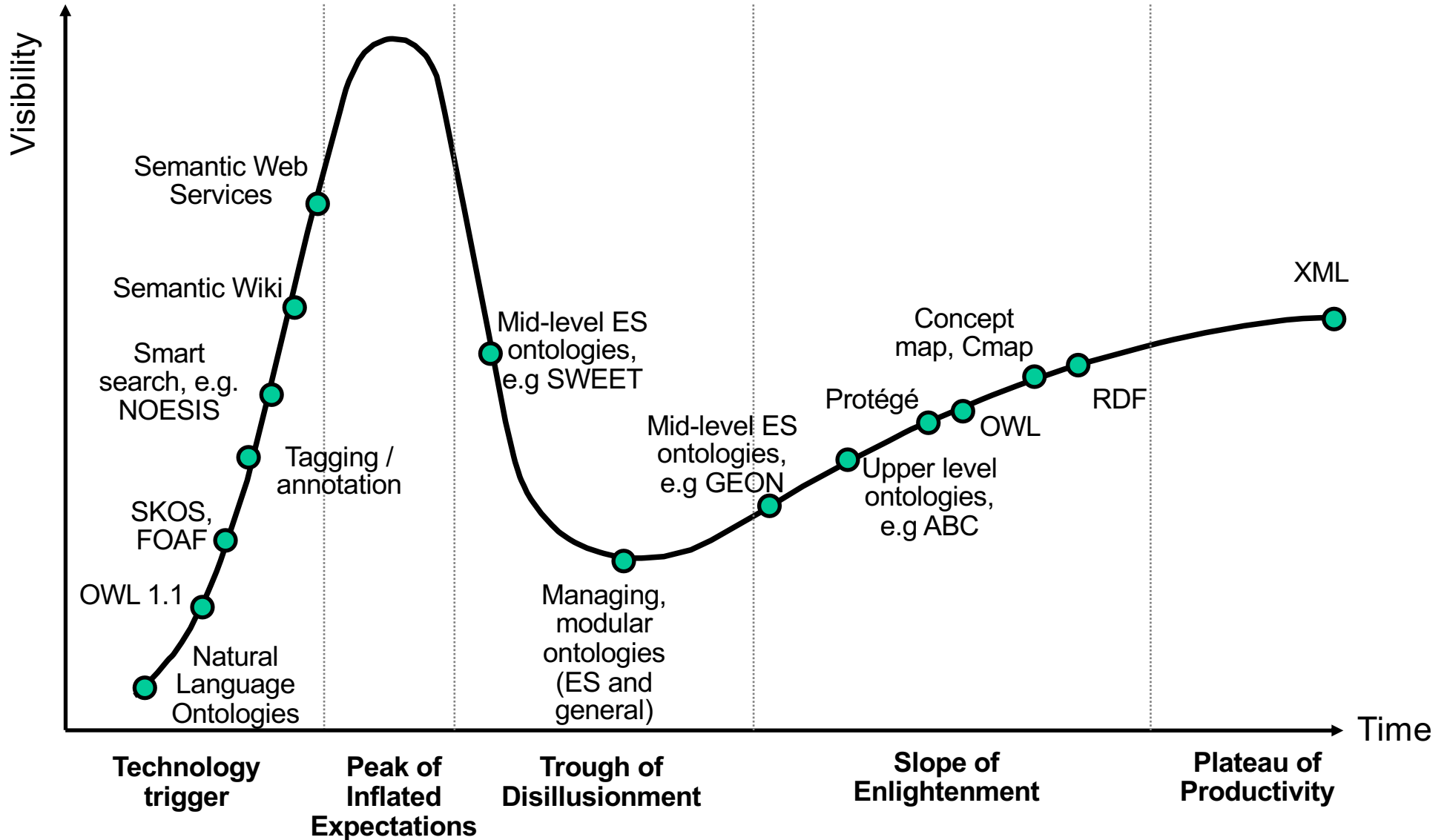
Google Earth 'Hype Cycle'

Visibility

Google Earth mashup mania 01/06

Launch of Google Earth 06/05

Google Maps and Keyhole Integration 04/05

Google Acquires Keyhole Corp 10/04

In-Q-Tel Invests in Keyhole 05/03

Keyhole releases EarthSystem viewer 05/01

New Google Earth version and imagery updates 06/06

Google Earth 02/07

Google Earth 06/07

Years to mainstream adoption

○ < 2 years

● 2-5 years

● 5-10 years

● > 10 years

○ Obsolete before plateau

Time

Technology trigger

Peak of Inflated Expectations

Trough of Disillusionment

Slope of Enlightenment

Plateau of Productivity

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Placement on the Hype Cycle

- Maturity
  - Technical completeness / operational readiness
  - 'Widespread' use in production applications
- Visibility (examples)
  - References in conference presentations / papers
  - Number of press / journal articles
  - Inclusions in proposals for funding
- Rate of progression
  - How to estimate projected rate of adoption?
- Not Shown / Outside scope of hype cycle
  - Relevance/importance to Earth science community
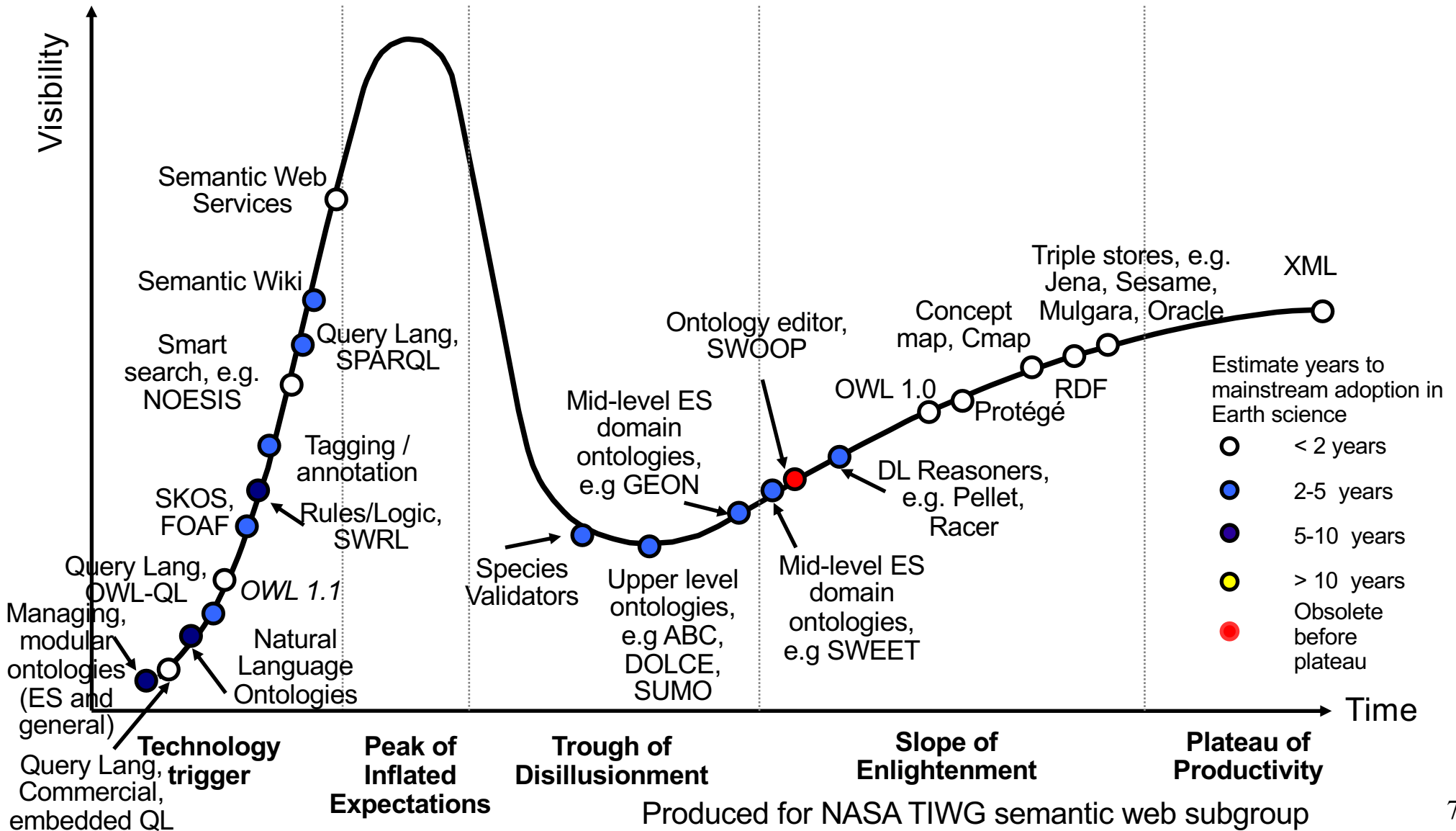 - How many places the technology is being used

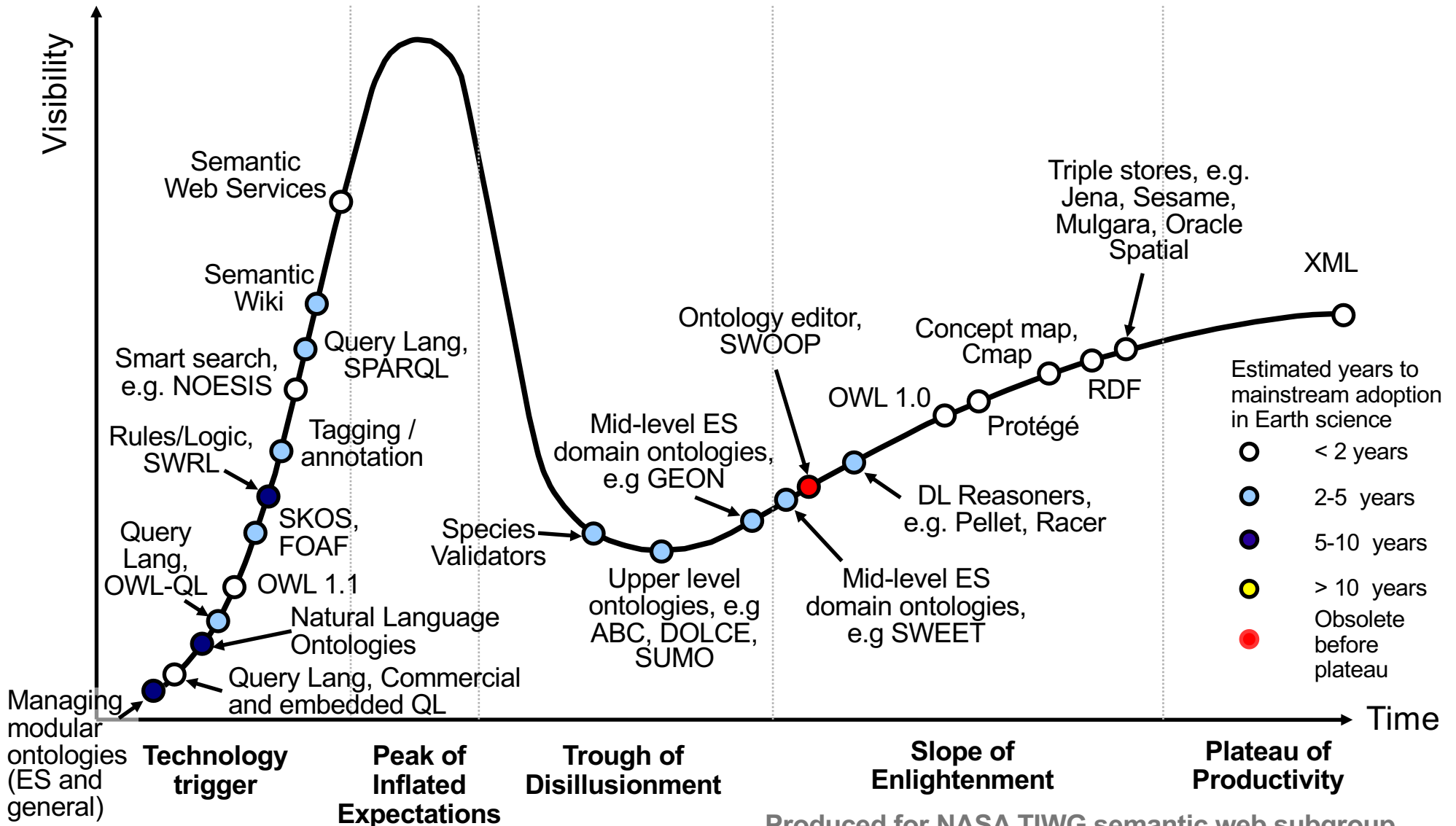# 2007 Hype Cycle for Emerging Earth Science Technologies v0.3

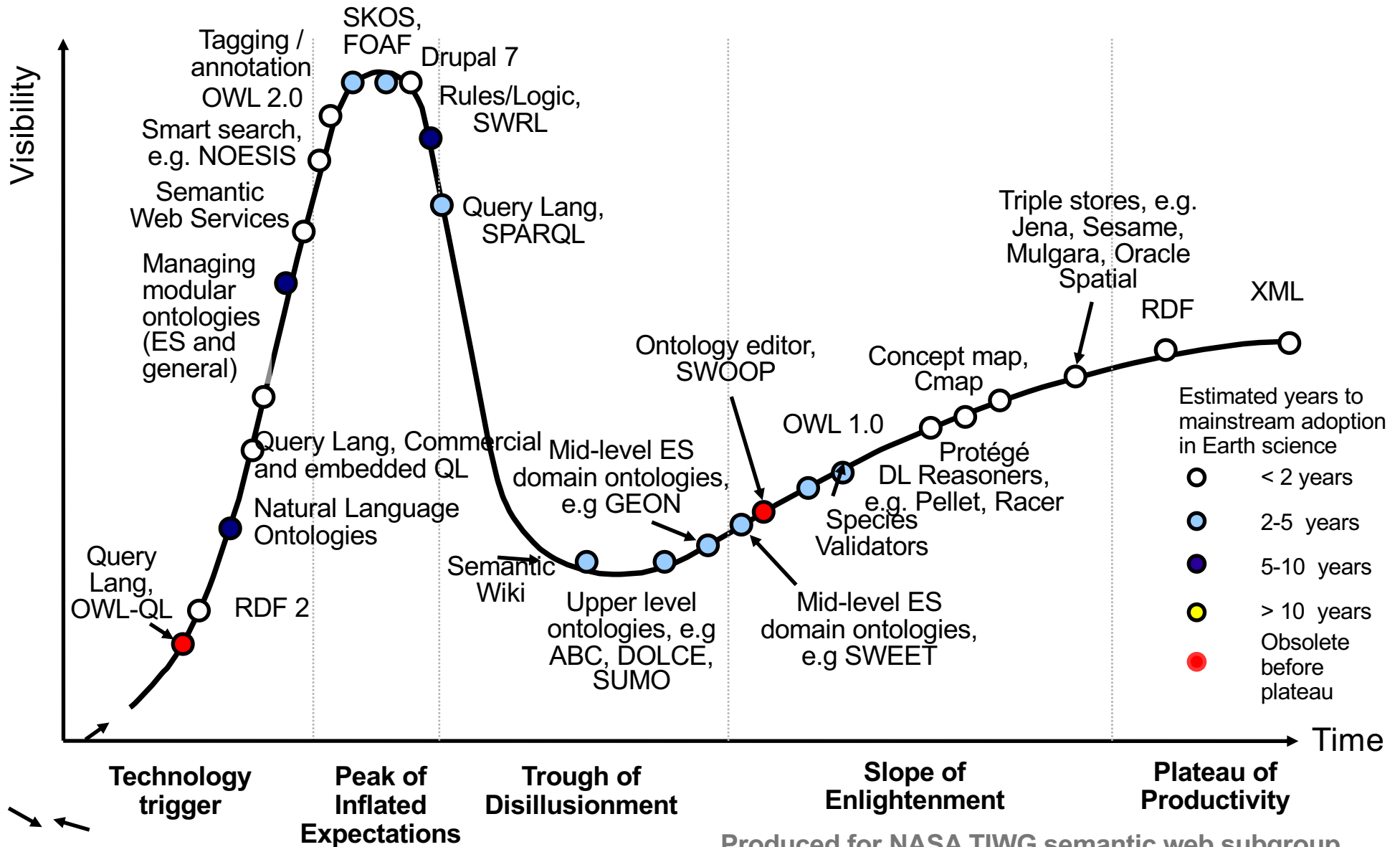# 2007 Hype Cycle for Emerging Semantic Web Technologies v0.1

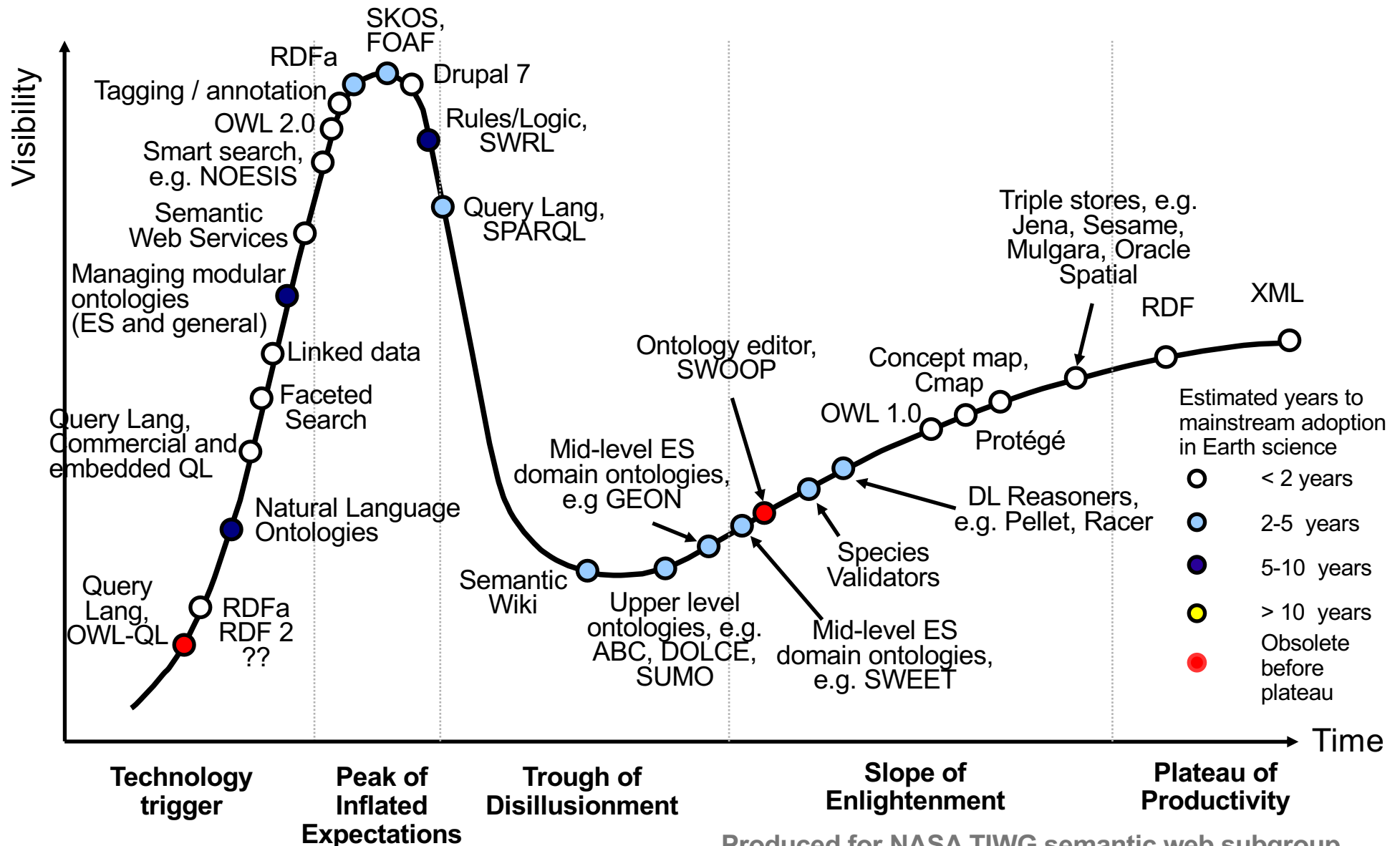# 2007-2008 Hype Cycle for Emerging Semantic Web Technologies v0.6

Produced for NASA TIWG semantic web subgroup

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2007-2008 Hype Cycle for Emerging Semantic Web Technologies v0.7

Visibility

Semantic Web Services

Semantic Wiki

Smart search, e.g. NOESIS

Query Lang, SPARQL

Rules/Logic, SWRL

Tagging / annotation

SKOS, FOAF

Query Lang, OWL-QL

OWL 1.1

Natural Language Ontologies

Query Lang, Commercial and embedded QL

Managing modular ontologies (ES and general)

Species Validators

Mid-level ES domain ontologies, e.g GEON

Upper level ontologies, e.g ABC, DOLCE, SUMO

Ontology editor, SWOOP

OWL 1.0

DL Reasoners, e.g. Pellet, Racer

Mid-level ES domain ontologies, e.g SWEET

Concept map, Cmap

Protégé

Triple stores, e.g. Jena, Sesame, Mulgara, Oracle Spatial

RDF

XML

Estimated years to mainstream adoption in Earth science

○ < 2 years
◐ 2-5 years
● 5-10 years
○ > 10 years
● Obsolete before plateau

Technology trigger

Peak of Inflated Expectations

Trough of Disillusionment

Slope of Enlightenment

Plateau of Productivity

Time

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2010-2011 Hype Cycle for Emerging Semantic Web Technologies v0.8

2010-2011 Hype Cycle for Emerging Semantic Web Technologies v0.81

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2018? Draft Hype Cycle for Semantic Web Technologies v0.9

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