



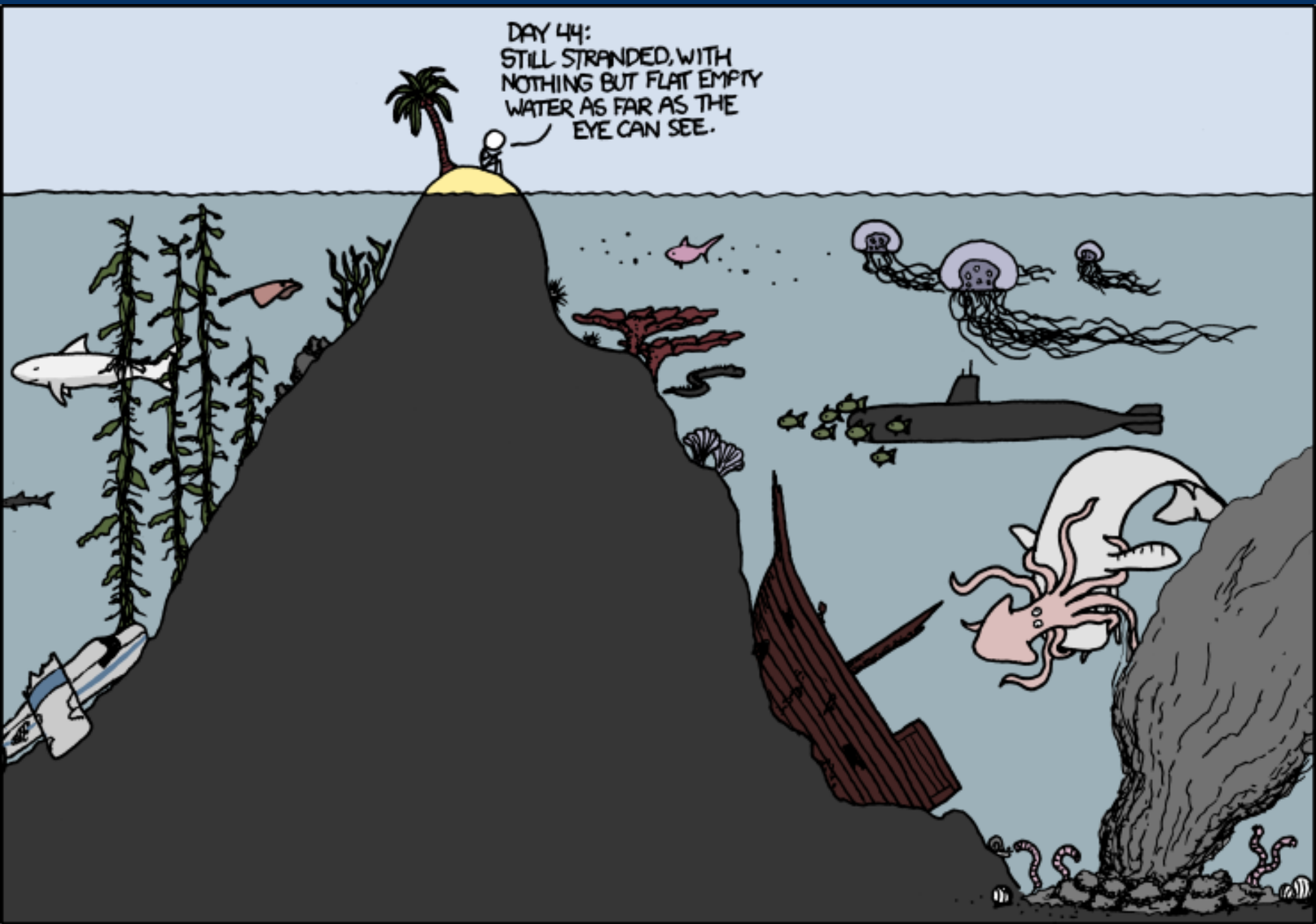
IHO MSDI Open Forum

ArcGIS: Charting New Value for your Data

Geoffrey Gomez and Rafael Ponce

Tuesday, February 4, 2014
Silver Spring, MD. USA

DAY 44:
STILL STRANDED, WITH
NOTHING BUT FLAT EMPTY
WATER AS FAR AS THE
EYE CAN SEE.



out of sight, out of mind



There is a world to discover below water



CyberGIS Software Integration for Sustained Geospatial Innovation

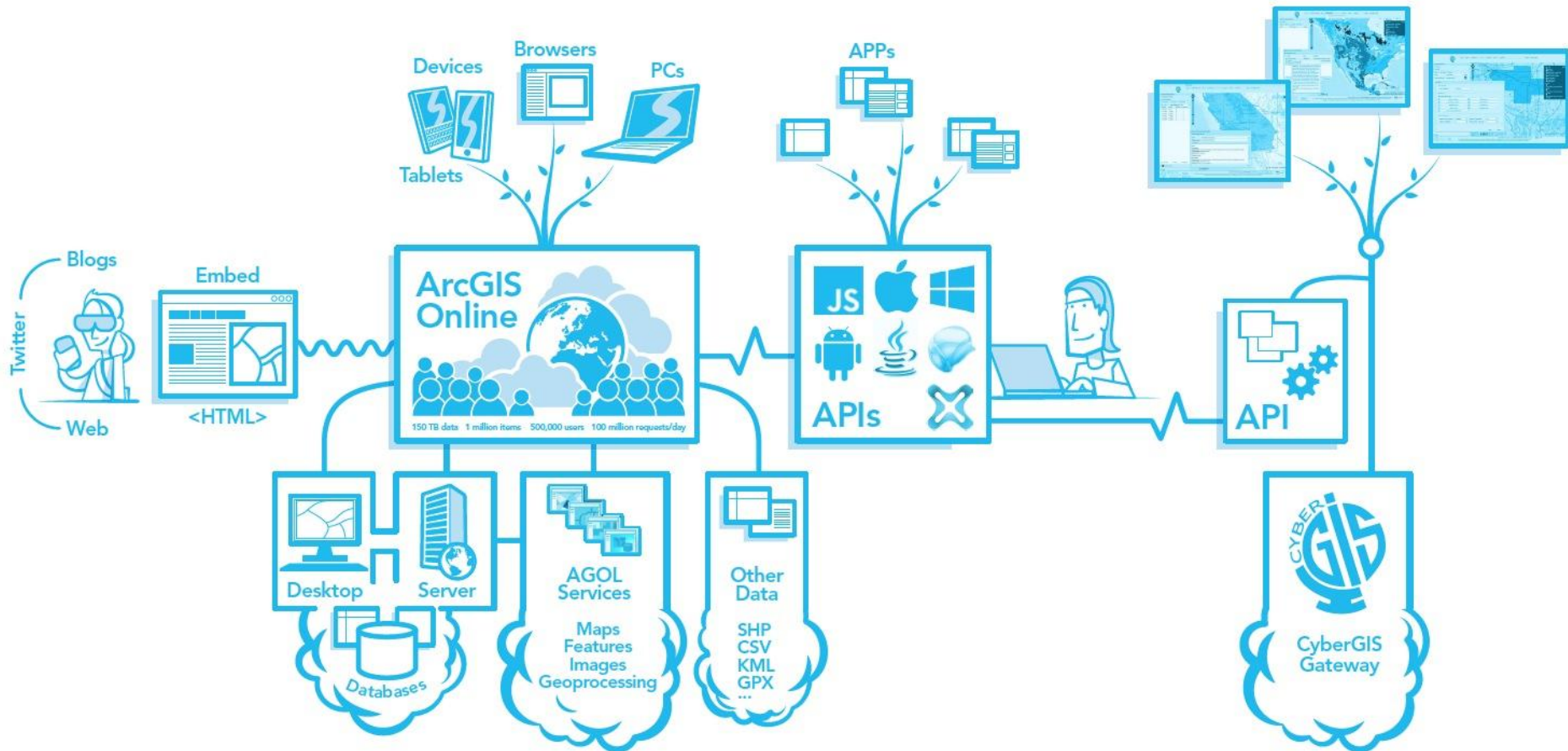
CyberGIS Project

- A National Science Foundation-funded project that aims to establish a fundamentally new software framework via seamless integration of cyberinfrastructure, GIS and spatial analysis/modeling capabilities.
- Lead by the University of Illinois, Urbana-Champaign and involving scientists from Arizona State, University of Washington, the San Diego Supercomputer Center, UCSB, the US Geological Survey (USGS) and the Department of Energy's Oak Ridge National Lab (ORNL)
- Esri is a project partner.



<http://cybergis.cgl.uiuc.edu/cyberGISwiki/doku.php>

CyberGIS Gateway and ArcGIS Online Integration



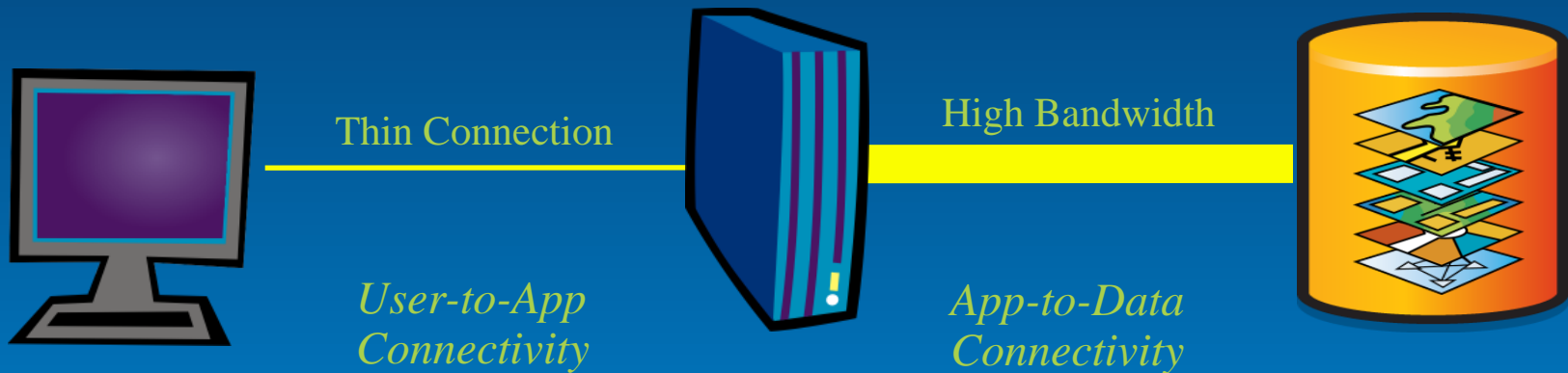
Architecture

Three Elements & Two Networks

① **Users**

② **Applications**

③ **Data**



GIS software evolution

What are the lessons learned?

Platform performance change over time

2015

1975

1995

2005

2010

>> 10x faster hardware

>> 3.5x faster hardware
Better networks

>> 1.2x faster hardware
Improved networks

20 years

Tightly scripted software code

10 years

Object relational software
>2x more processing

5 years

Service-oriented architecture
>2x more processing

3+ years

Cloud computing

①

ARC/INFO 1982

ArcView GIS 1992

MapObjects 1996

ArcIMS 1997

②

ArcGIS Desktop 1999

- ArcSDE
- ArcGIS Server 2004
- ArcGIS Engine

③

ArcGIS 2005 – 2009

- REST API
- Rich Internet clients
- Mobile GIS

④

Hardware virtualization
ArcGIS 2010 – 2013

- ArcGIS Online
- Imagery

3G 4G Broadband

Roll-your-own GIS

Workstation GIS

Scripts

AML

Client / Server

SDE Direct Connect

Objects

VBA

HTTP/SOAP

Web GIS

Services

Python

REST

Portal GIS

Cloud

Departmental GIS

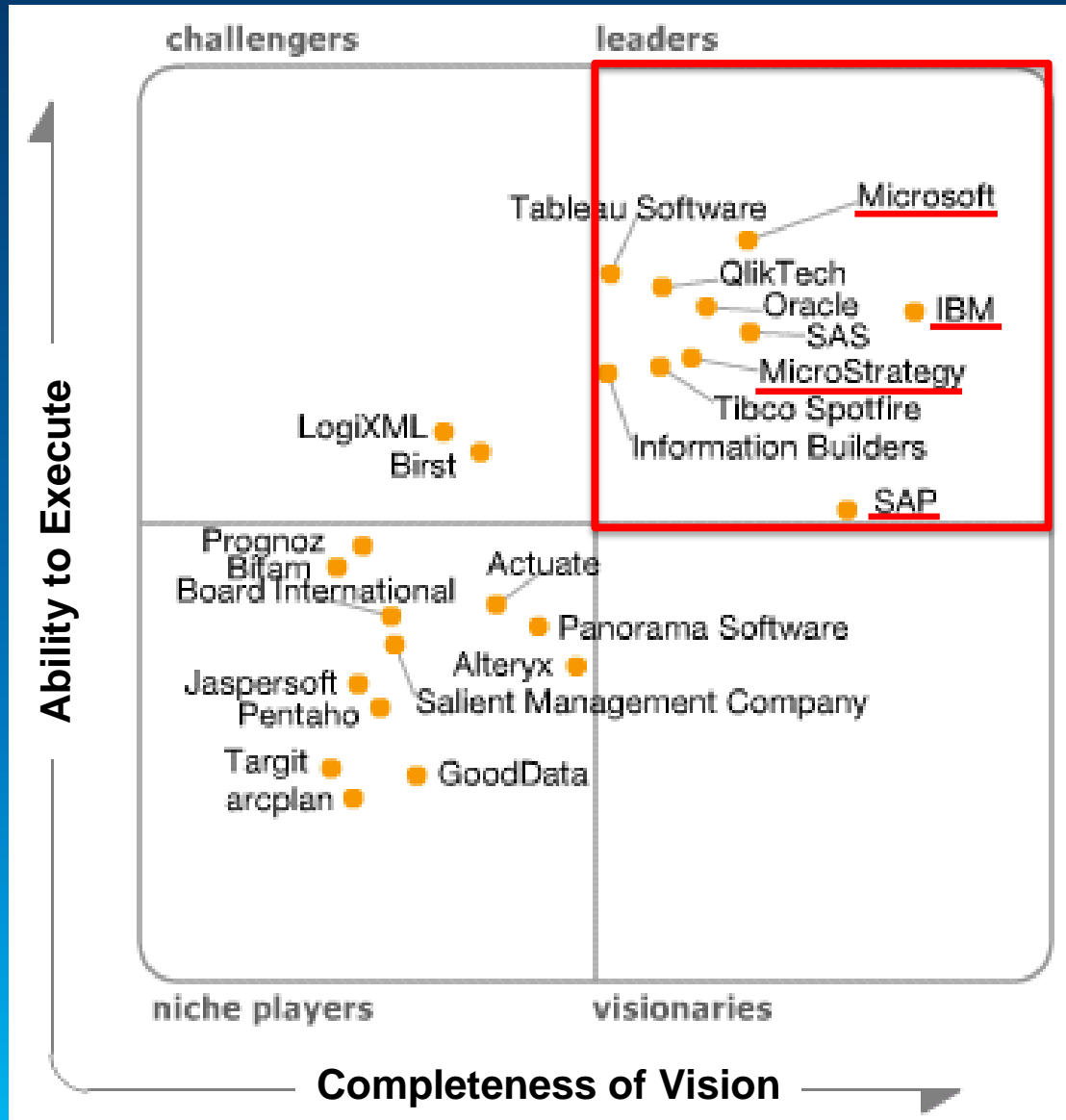
Enterprise GIS

Federated GIS

...Technology drives innovation

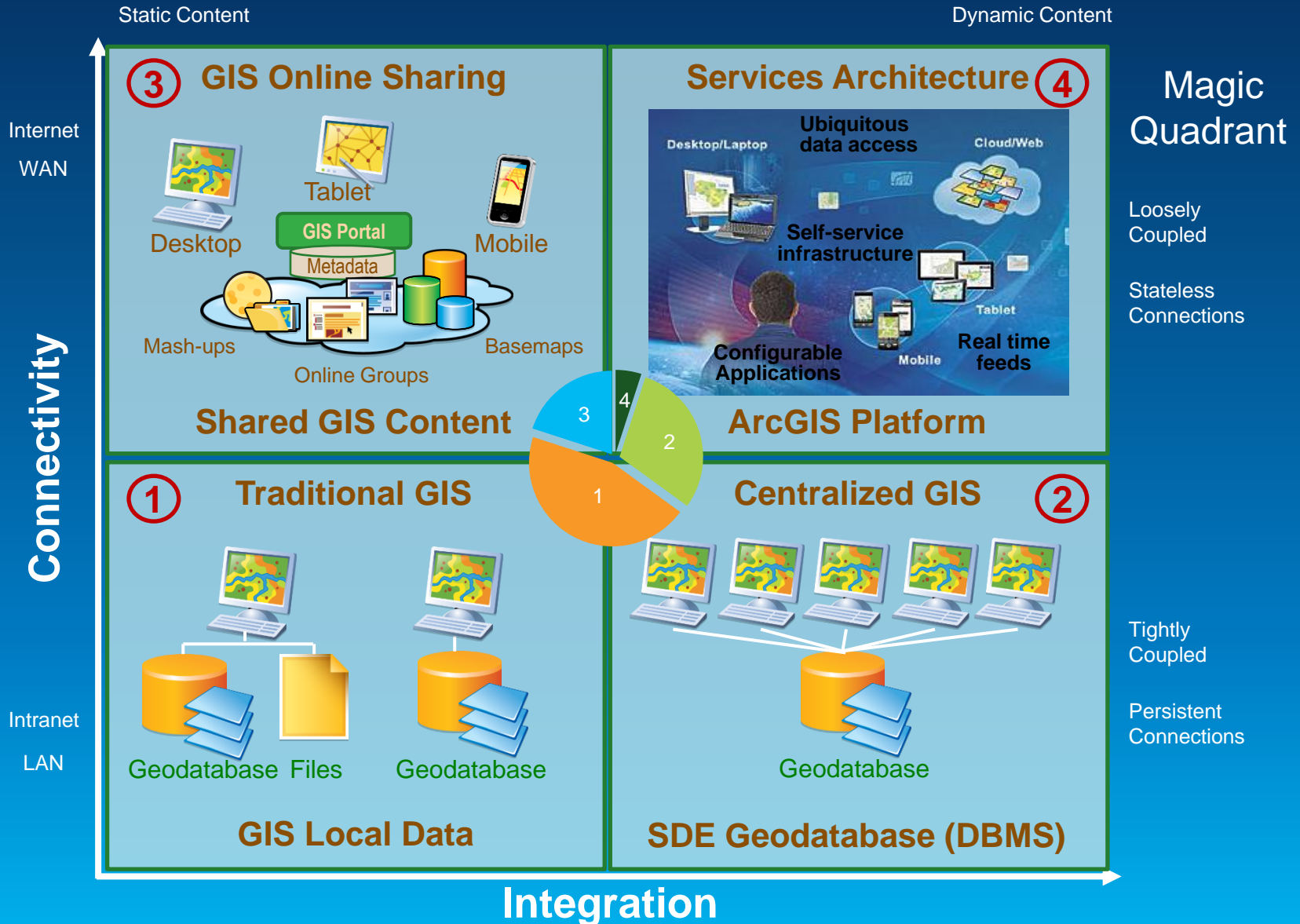
Gartner Magic Quadrant for Business Intelligence and Analytics Platforms

As of February 2013



Magic
Quadrant

Emerging Technology Trends in GIS



AGOL: Most Significant Innovation in 20 years

1992

ArcView

Desktop

① Shapefile



2013

ArcGIS Online

Web Map

Feature Service ④



Empowers any user to create their own Web Maps.....using only a browser!

Demo

MSDI in Action

Geoffrey Gomez



ArcGIS Online
Your story, delivered.



Understanding our world.

THANK YOU

Rafael Ponce rponce@esri.com

Geoffrey Gomez ggomez@esri.com