



Inject GIS into your Business Systems

Gerry Clancy

Marten Hogeweg

GIS Is Integrating Geography into Everything We Do

Changing the Way We Think and Act



Bringing Together Data, Technology, and People . . .
... Creating a Framework for Solving Complex Problems
... Implementing an Enterprise GIS Project

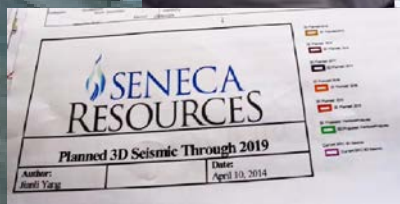
It's About the Organization

Deploying the Platform is About...

Enabling All of the Users
in the Organization

Bringing Esri Technology
to the Mission

Unlocking Current
GIS Work



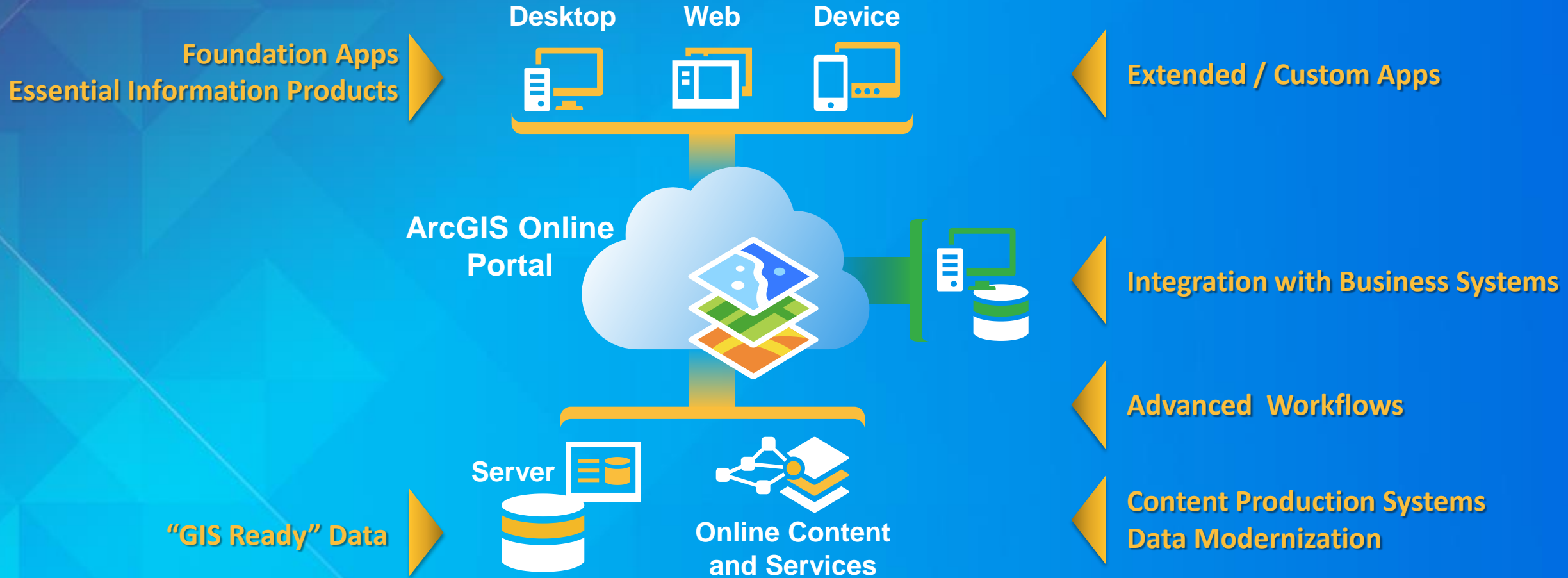
Background Concepts

- **Platform Implementation Patterns**
 - We're focusing on the right-hand side
- **Location Value Assessment**
 - Helps create the backlog and priorities
- **Platform Implementation Project Lifecycle**
 - Create a plan to realize the enterprise vision

Platform Implementation Patterns

Initial Operating Capability

Integrated Enterprise System



Use a Location Value Assessment to unlock value

What

Why

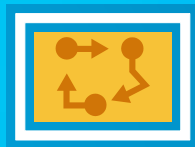
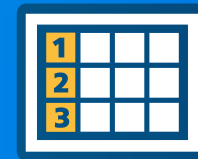
When

What – Location Value Assessment Collaborative Workshop



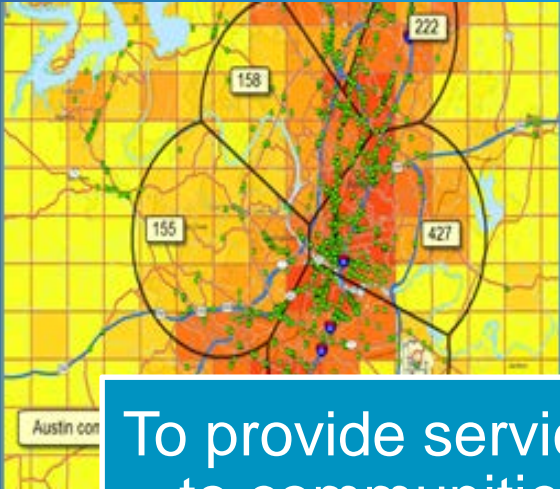
Assess value of location

Identify and prioritize opportunities

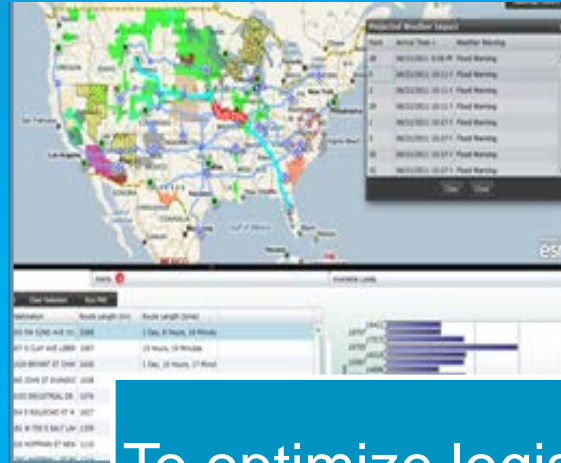


Provide justification and guidance

Why? – Believe That Geography Can Transform



To provide services to communities



To optimize logistics



To fight the spread of disease

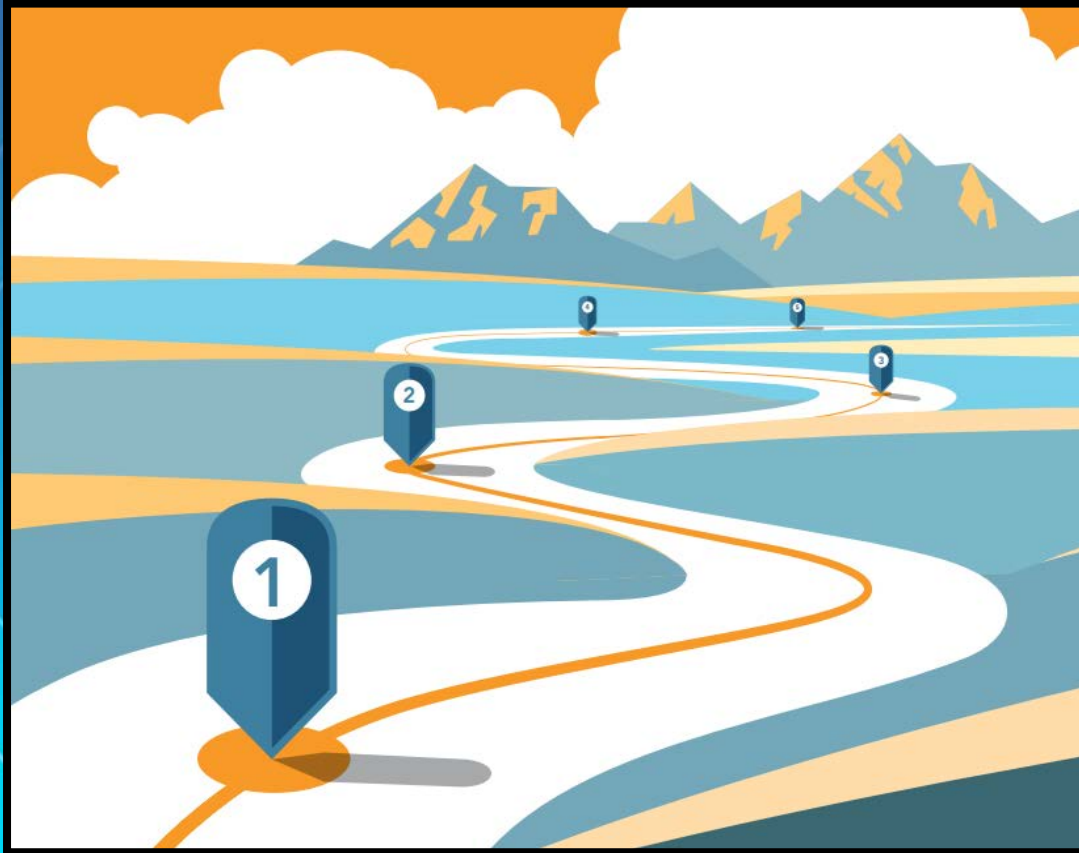
Transforming the way we work

Why – Empower Employees and Contractors

To discover, use, make,
and share maps from any
device, anywhere, anytime



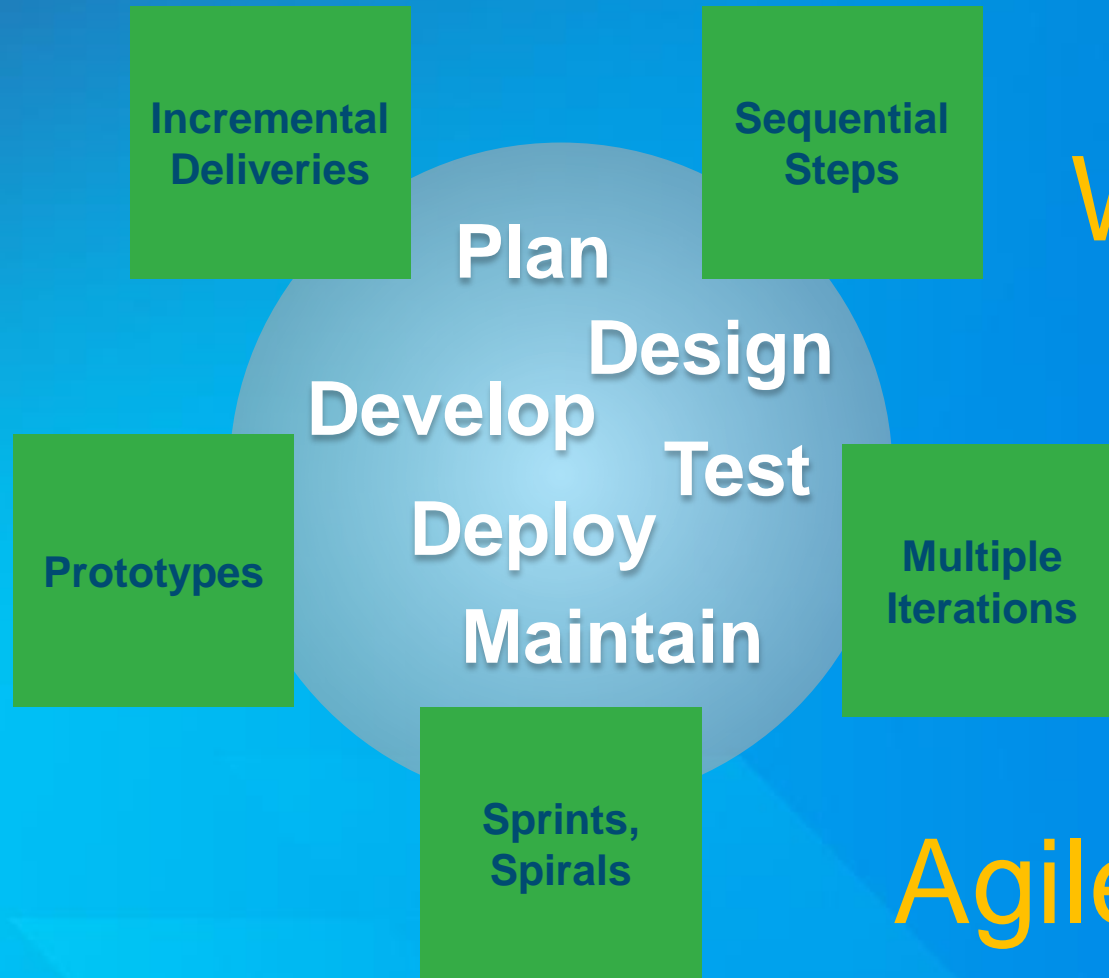
When – Understand the Business Priorities



- 1 Location Value Assessment
- 2 Pilot Project
- 3 Production Rollout
- 4 Operations and Support
- 5 What's Next

Platform Implementation Project Lifecycle

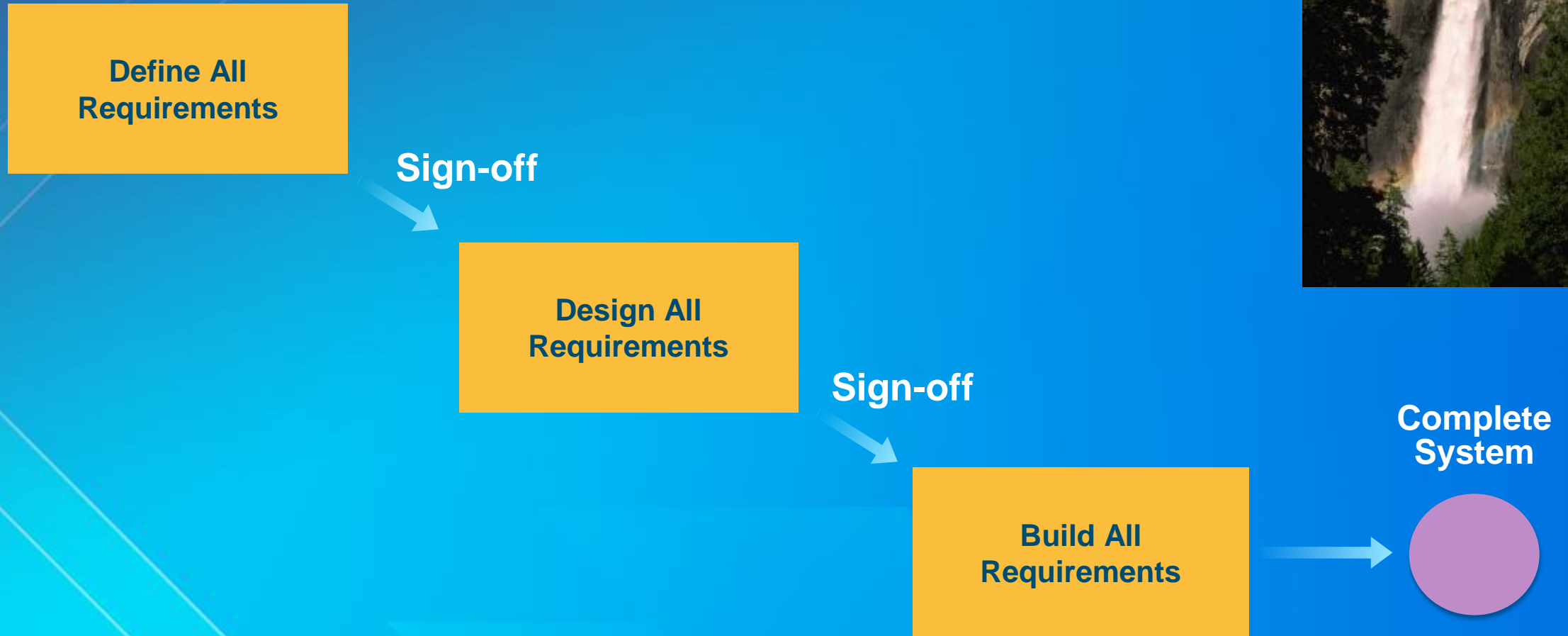
Staged



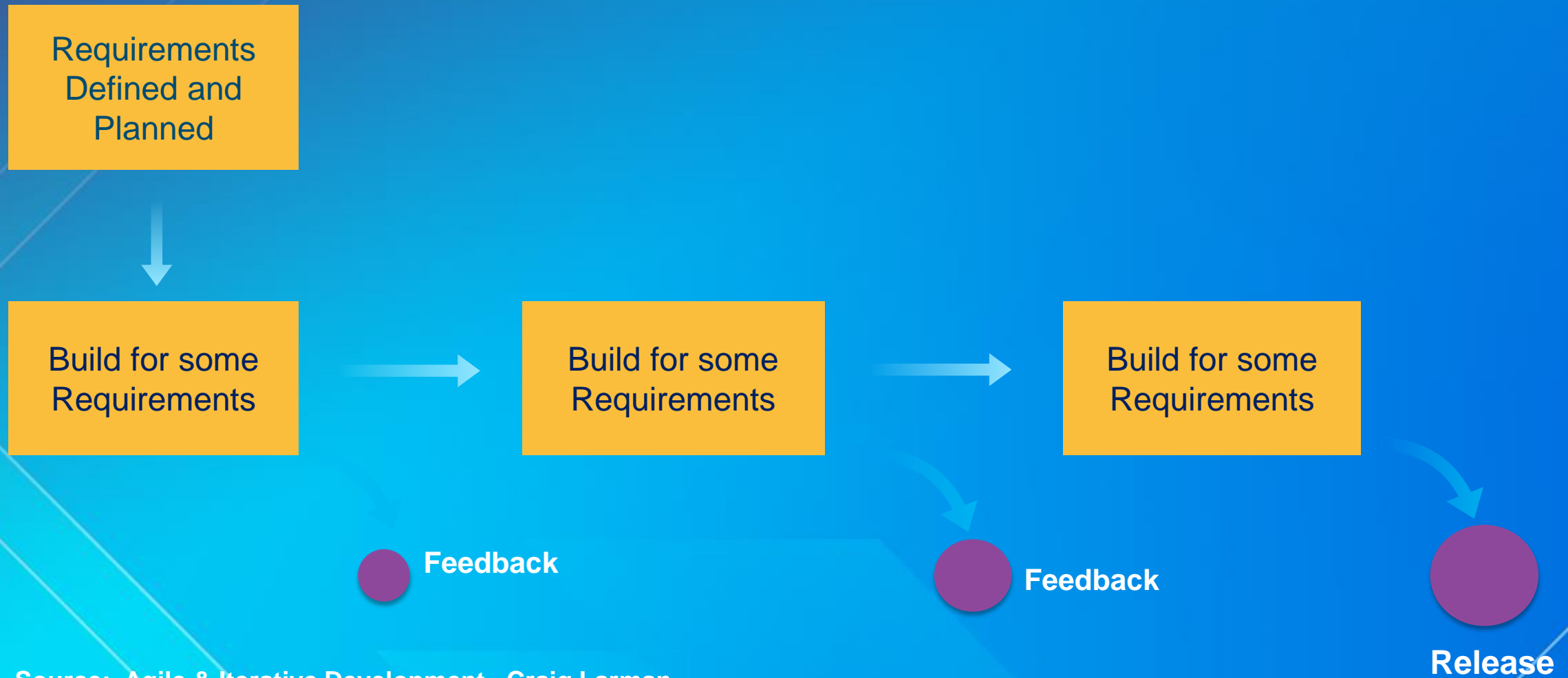
Waterfall

Agile/Scrum

Sequential – Waterfall Defined



Iterative – Staged Delivery Defined



Source: Agile & Iterative Development. Craig Larman

Agile Defined



Feasibility,
Initiation



Backlog,
Priorities, User
Stories



Short
Development
Sprints



Test/Evaluate
Sprints



Retrospective,
Adapt
Requirements



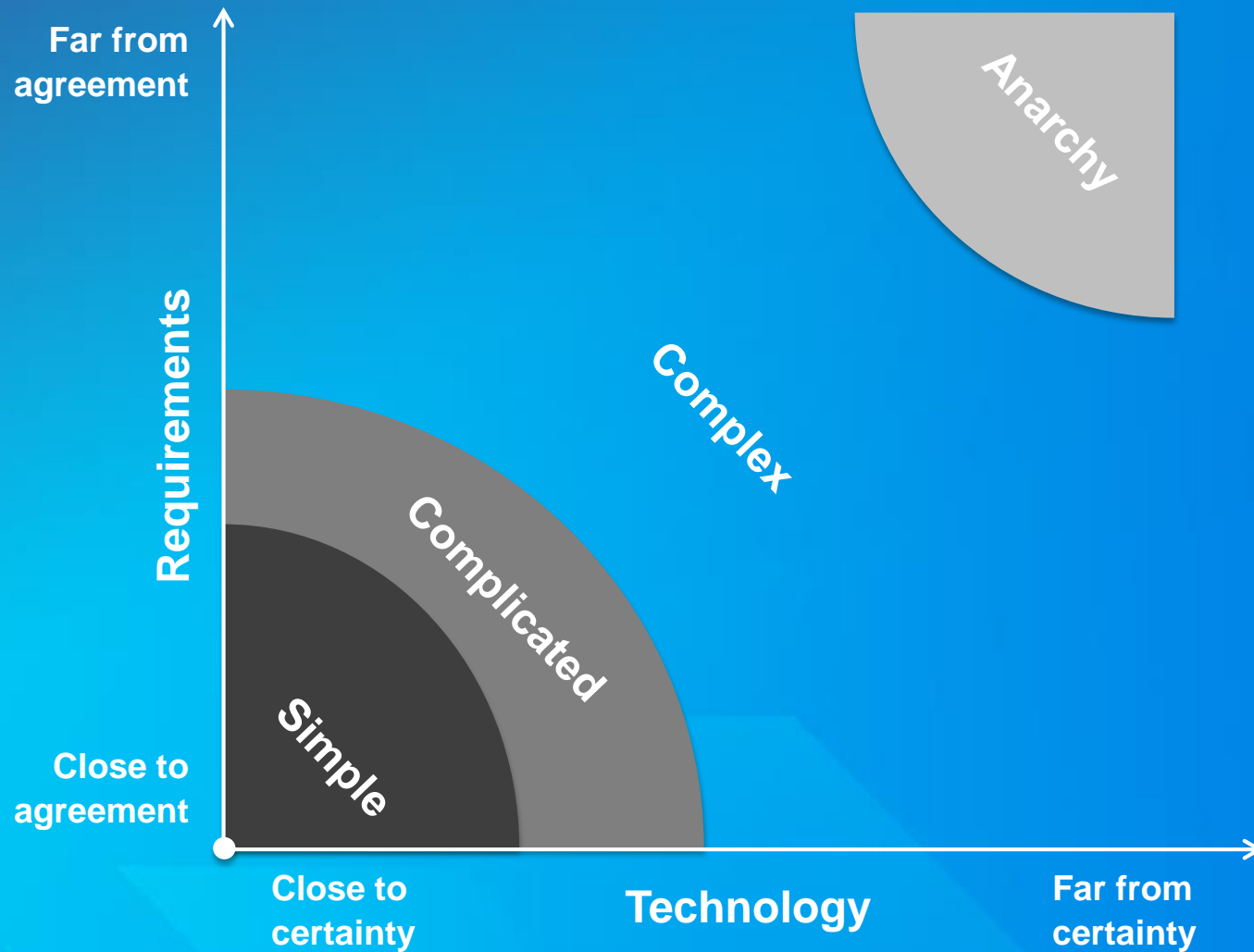
Releases

Sprint n

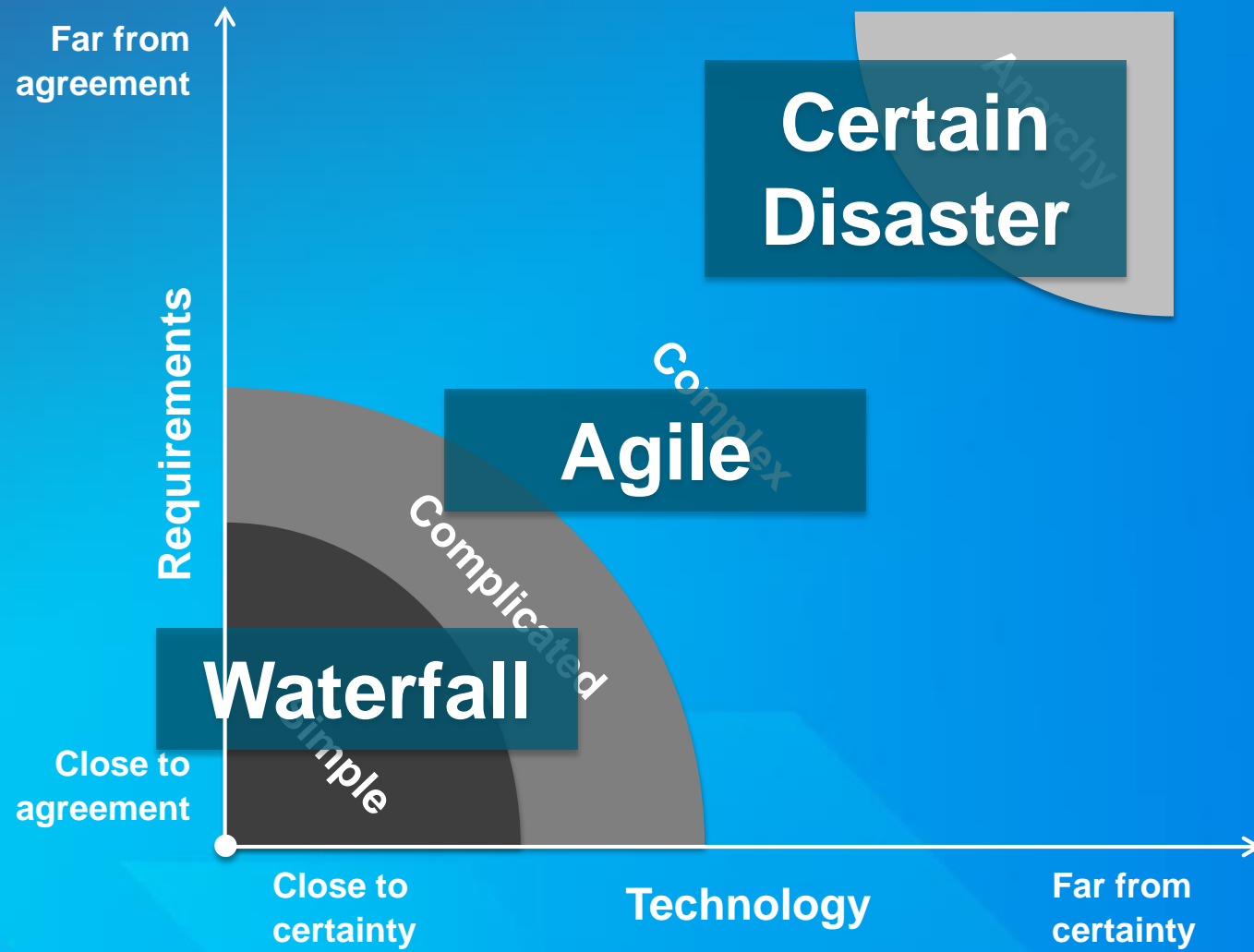
Sprint 1

Sprint 2

How Requirements, Technology Affect your Choice



How Requirements, Technology Affect your Choice



Other Project Management Considerations

Scope, Technology, Contract

- How well defined are the requirements?
- Is there agreement on technology
- Are there fixed deliverables?

Project Size, Duration

- How many requirements or applications?
- How long is development?
- How many business units/processes?

Capacity, Capabilities, Environment

- How involved are the users?
- How well can multiple / frequent releases be supported?
- How stable/experienced is the team?

When do These Models Work Best?

	Waterfall	Staged Delivery	Agile
Scope, Technology, Contract	<ul style="list-style-type: none">• Clear requirements• Fixed deliverables• Single application	<ul style="list-style-type: none">• Several applications• Prototypes expected	<ul style="list-style-type: none">• Flexible scope, deliverables• One or several applications
Size, Duration	<ul style="list-style-type: none">• Small size, short duration project	<ul style="list-style-type: none">• Medium or large size, mid to long duration	<ul style="list-style-type: none">• Any size or duration project
Capacity, Capabilities, Environment	<ul style="list-style-type: none">• Limited capacity, resources, and environment• Frequent turnover on project team	<ul style="list-style-type: none">• Capacity, resources, and environment to support multiple releases	<ul style="list-style-type: none">• Strong collaboration• Stable, experienced project team



Examples

examples

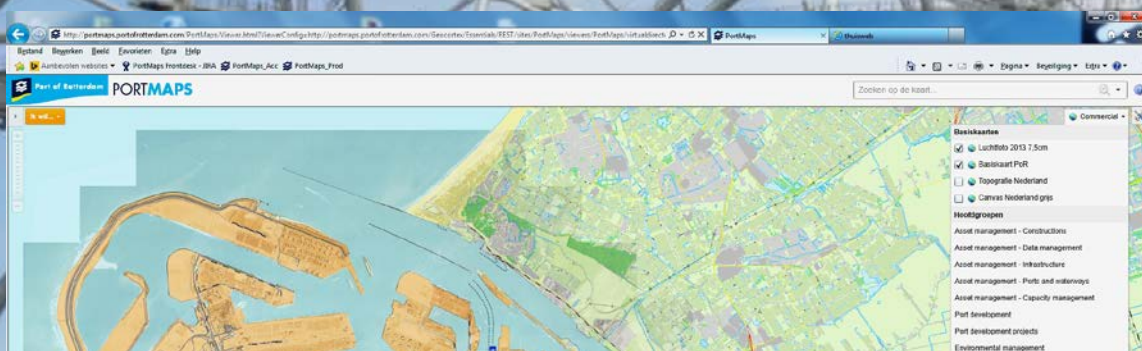
- Walgreens
- Port of Rotterdam
- OsiSoft
- Noaa
- SAP/Salesforce example???
-

Walgreens



Port of Rotterdam

Broadening Impact of the Platform



Asset Management

Transportation Modalities

Environmental Management

Harbor Master

Port Development

Port of Rotterdam Platform Implementation As-Is

Portal for ArcGIS
Webmaps
ArcMap
ArcGIS for AutoCAD
GeoCortex

Desktop

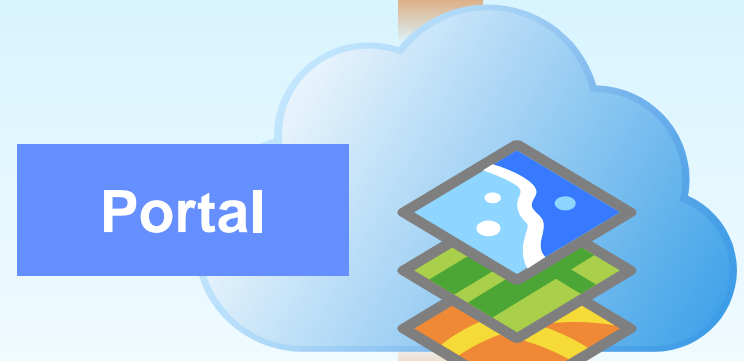
Web

Device



Quay Wall Viewer

Portal



SAP, SharePoint, AutoCAD,
STADIUM, AMprover, Hadoop

Quay Wall Lifetime Inspections

Data Migration from
Legacy System



Server

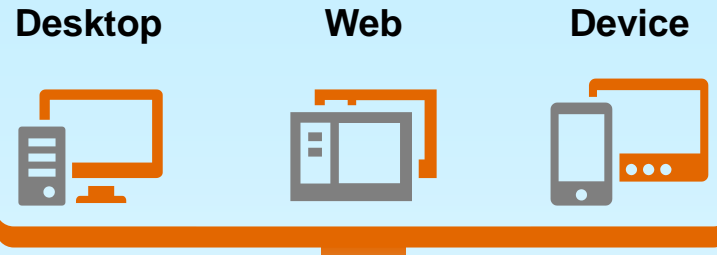
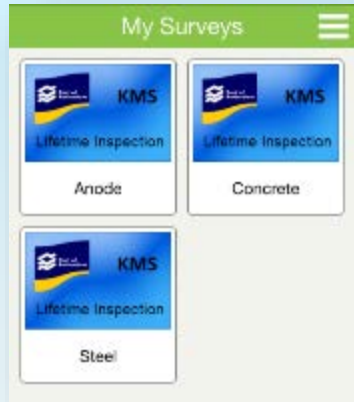


Online Content and
Services

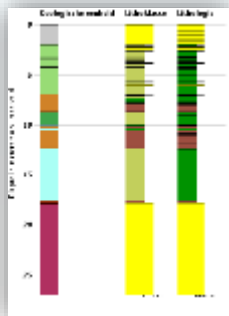
BIS/NIS/ENC production

Port of Rotterdam Platform Implementation – Short Term

Information Products
ArcGIS Pro
ArcGIS Online
Survey 123



Geotechnical Profiles
Soil Quality
Cross-sections
ArcGIS 10.3.1



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Spatial Project Planning
Business Intelligence

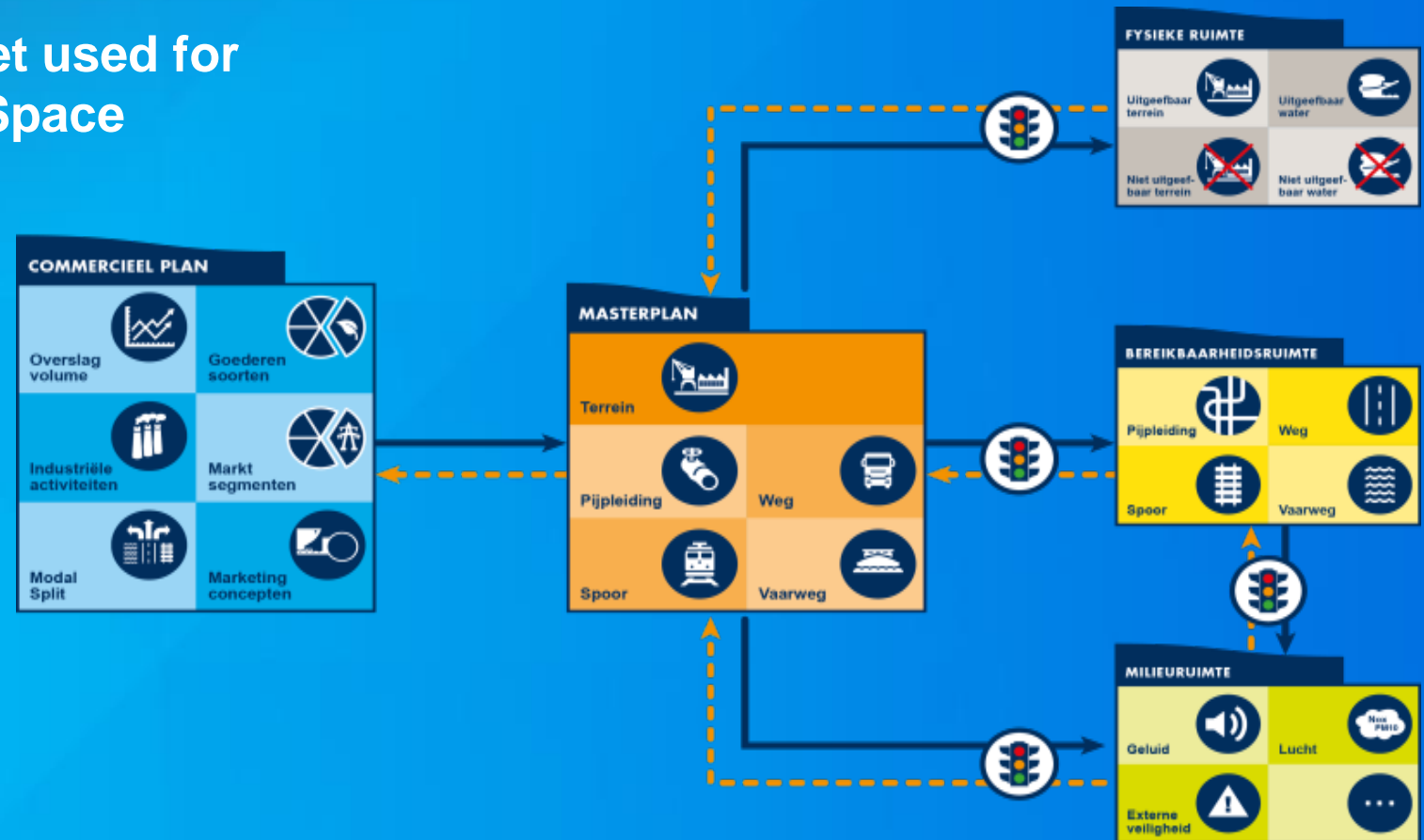
Geodesign (PortOptimizer)

Survey Driven ENC



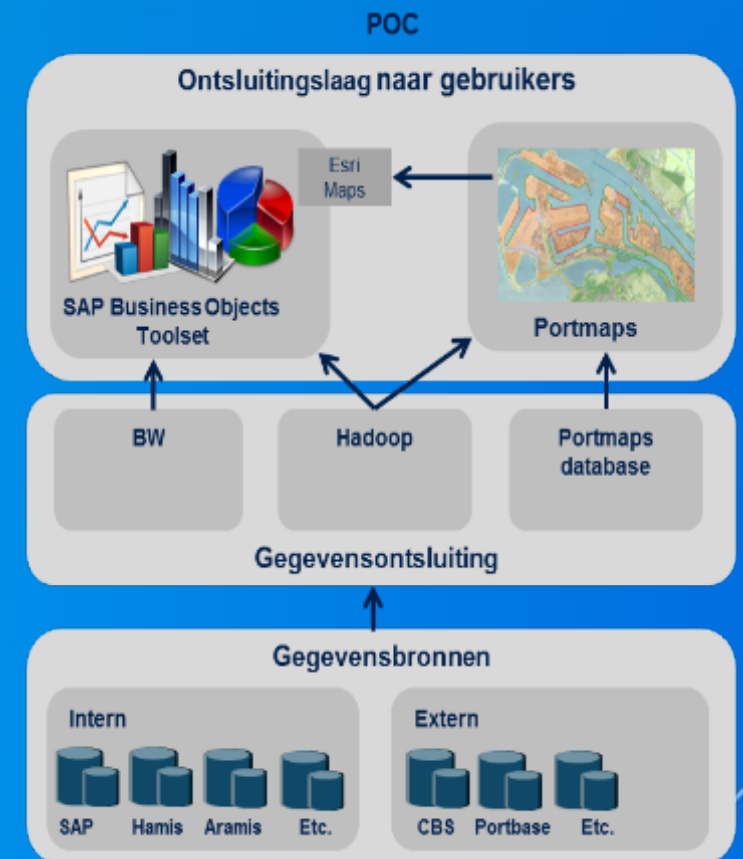
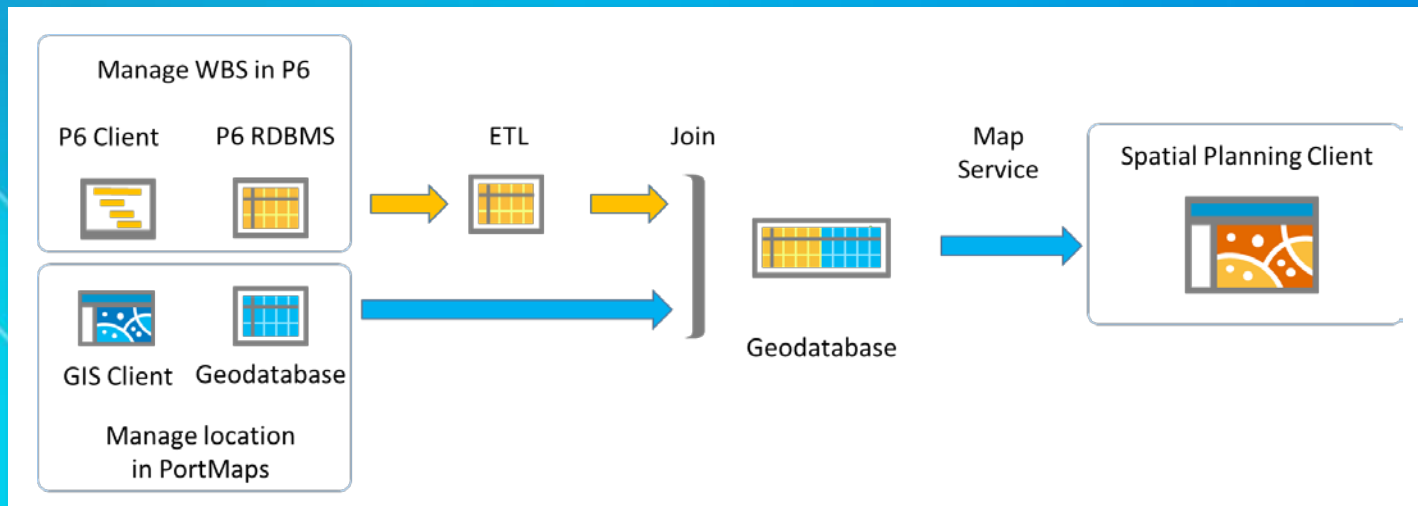
PortOptimizer – Implement Geodesign Process

- Pre-POC Initial Business Case
- POC – Replace spreadsheet used for Master Plan and Physical Space



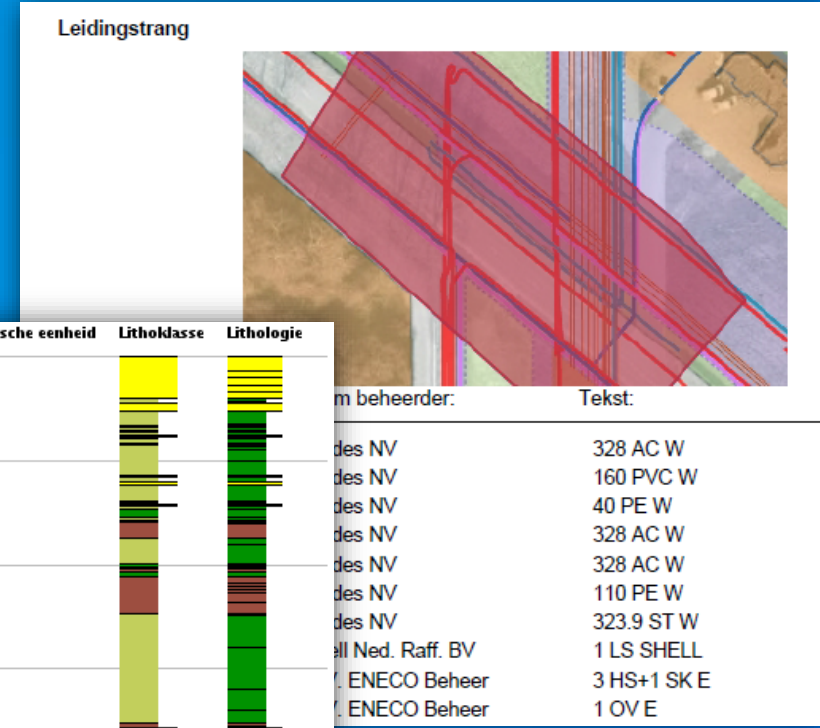
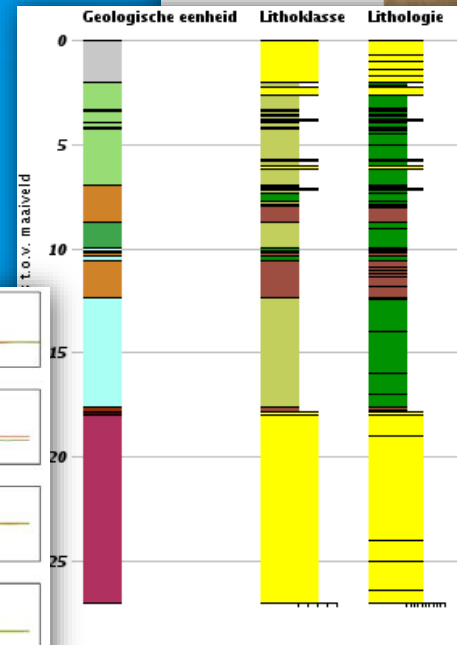
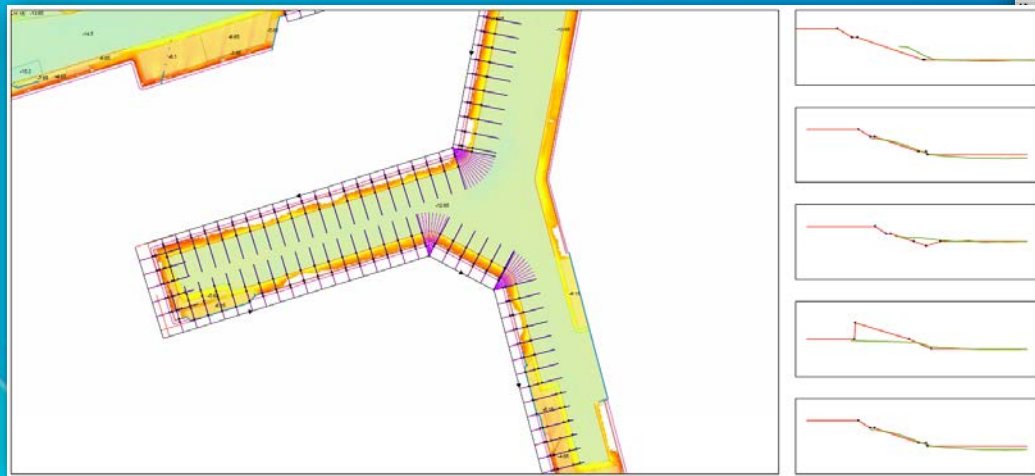
Integration Projects

- Primavera
- Key2Bodem
- ~~Esri Maps for Business Objects~~ SAP Lumira
- Document Management System



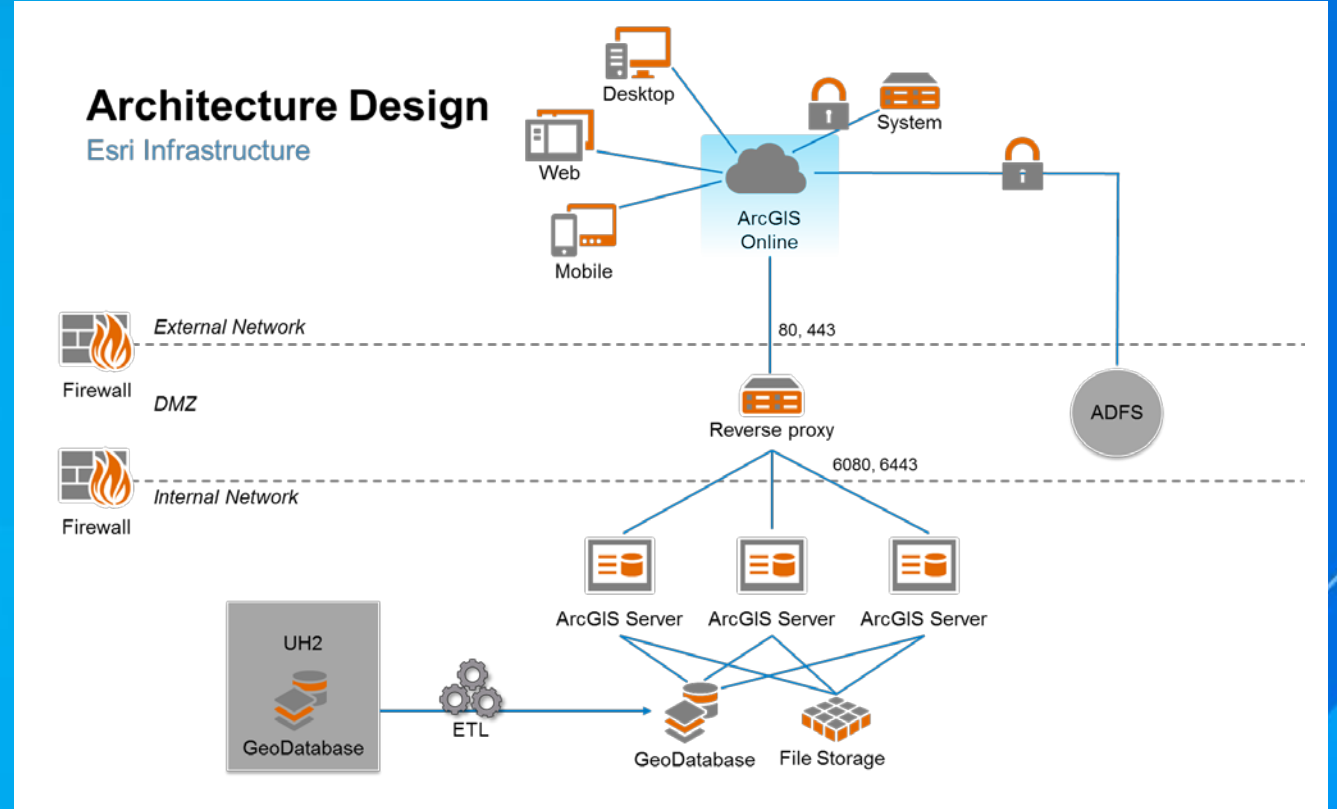
Add New Information Products

- Port has become self-supporting
- Detailed Object Reports
- Cross-sections
- Geotechnical Information



Updating the Software Infrastructure

- ArcGIS 10.3/10.3.1 Upgrade
- External-facing GIS Environment



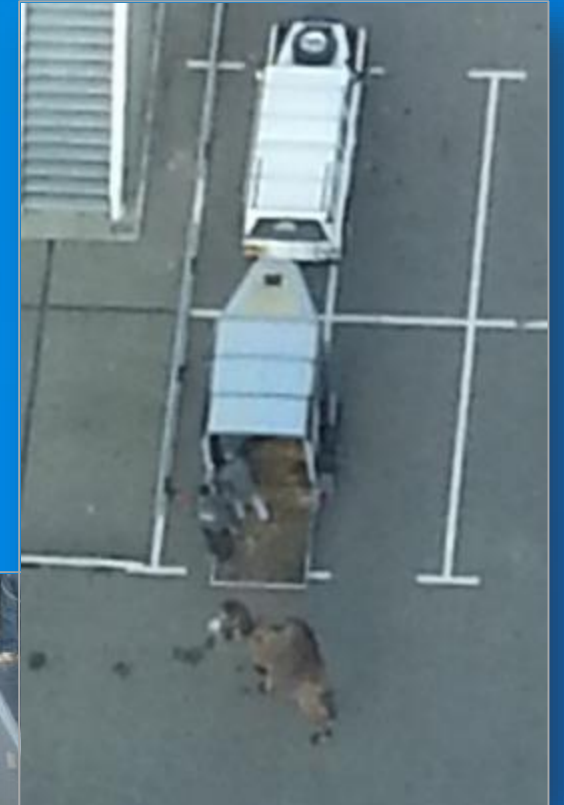
Port of Rotterdam – Approach

- Started left moved to the right
- Partnership and Capabilities
- Technical Solution
 - Customer had in-house systems → Complete Replacement
 - ArcGIS, ArcGIS for AutoCad, GeoCortex, Maritime (BIS/NIS/MCS), ETL, Big Data, Mobile
- Work Plan
 - Platform rollout
 - Data migration
 - System Integration
 - Information Products
 - Training

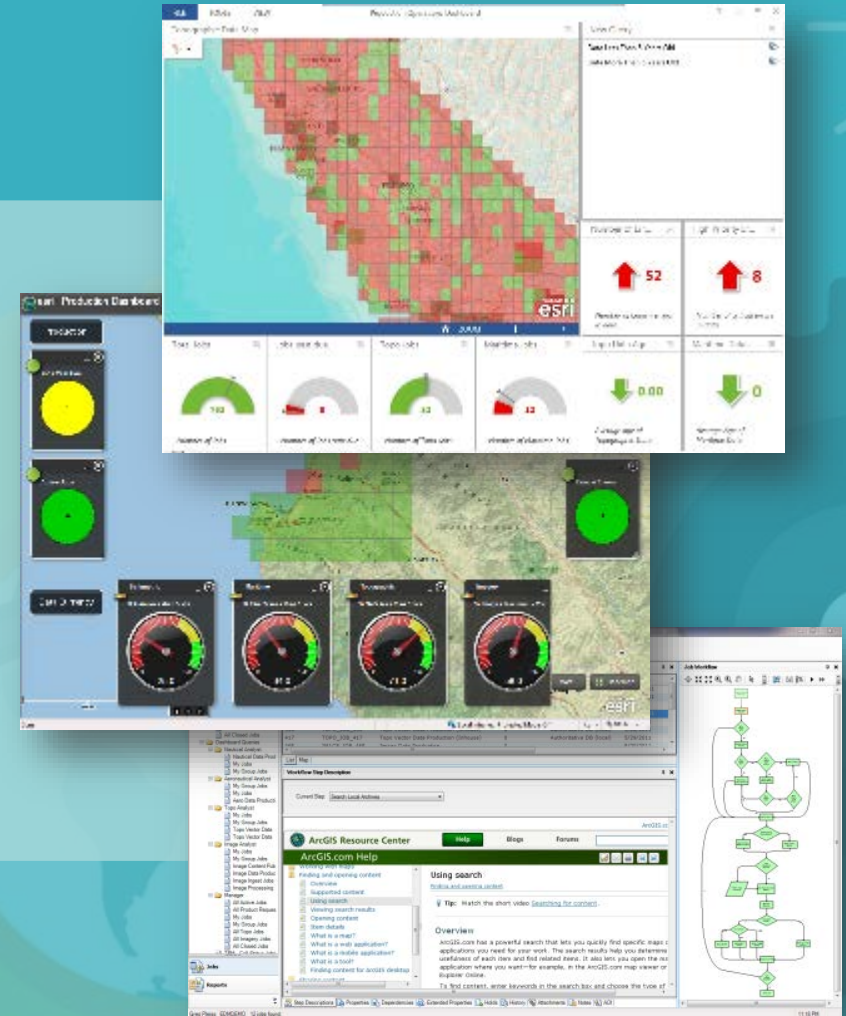
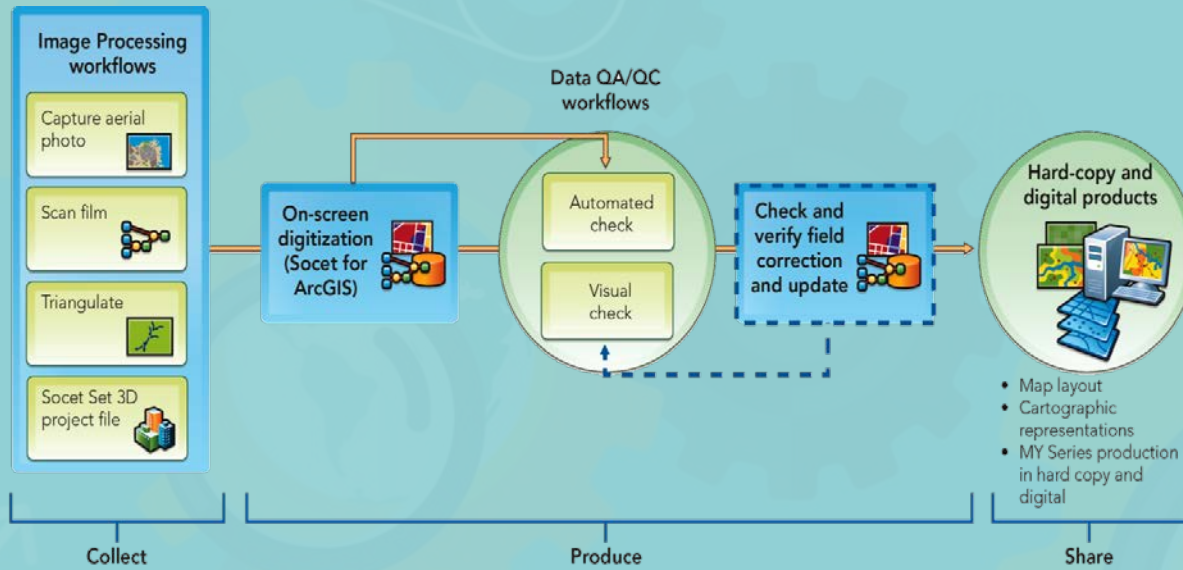


Port of Rotterdam – Lessons Learned

- **Consider Change Management**
 - Change from old systems to ArcGIS
 - Historic Staff Roles
 - Schedule Changes
- **Success factors**
 - Visionary at Port of Rotterdam
 - Enterprise Data Model
 - Long-term program layed out
 - Deliver on-time
 - Proof of Concept + Implementation
 - Onsite staff
 - 10-Year Partnership



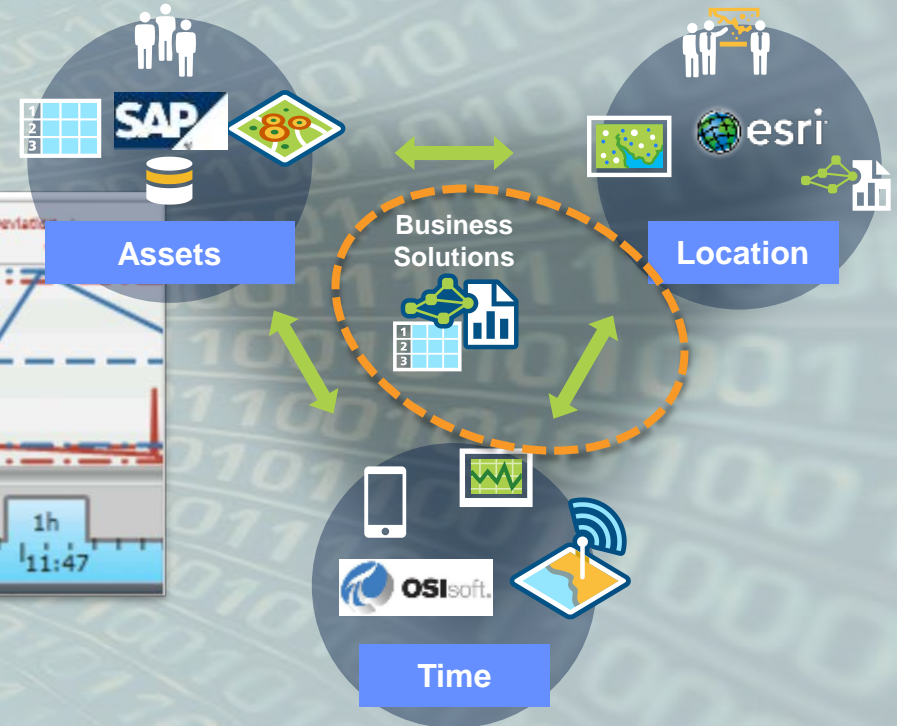
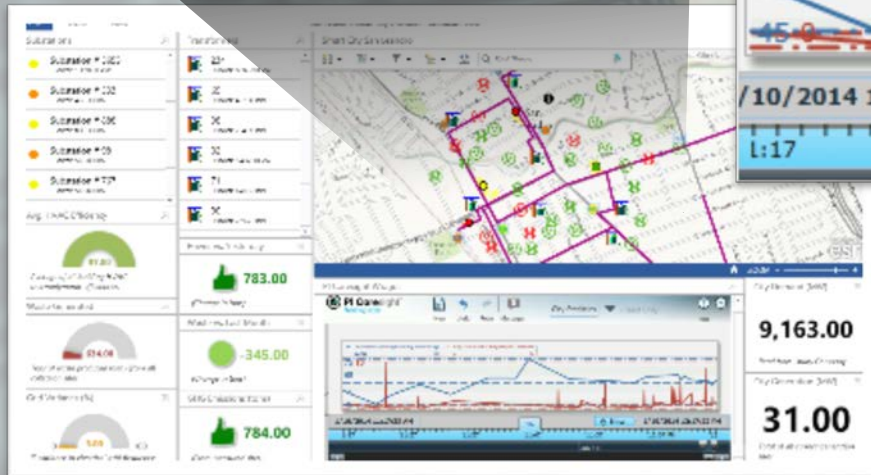
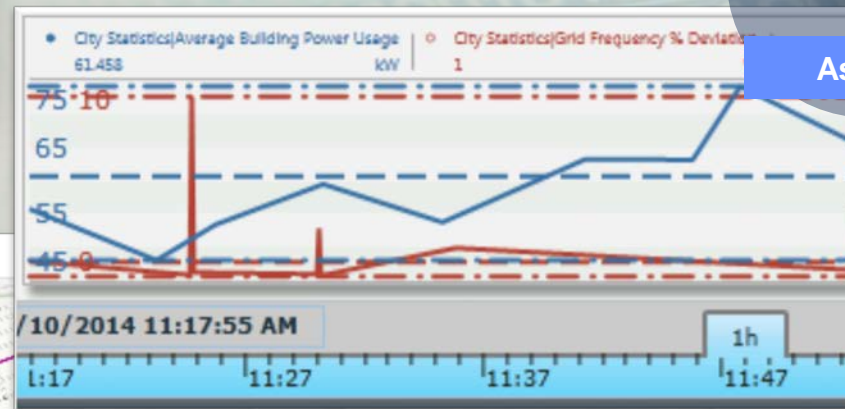
Advanced Workflows – Image Processing



Integration with Business Systems – OSIsoft Connector



Analyze Assets On a Map



“Layered maps, right-now maps, rewind-able maps ... finally bringing together space and time.”

Extended / Custom Apps – USDA ARS Plant Hardiness Zone Map

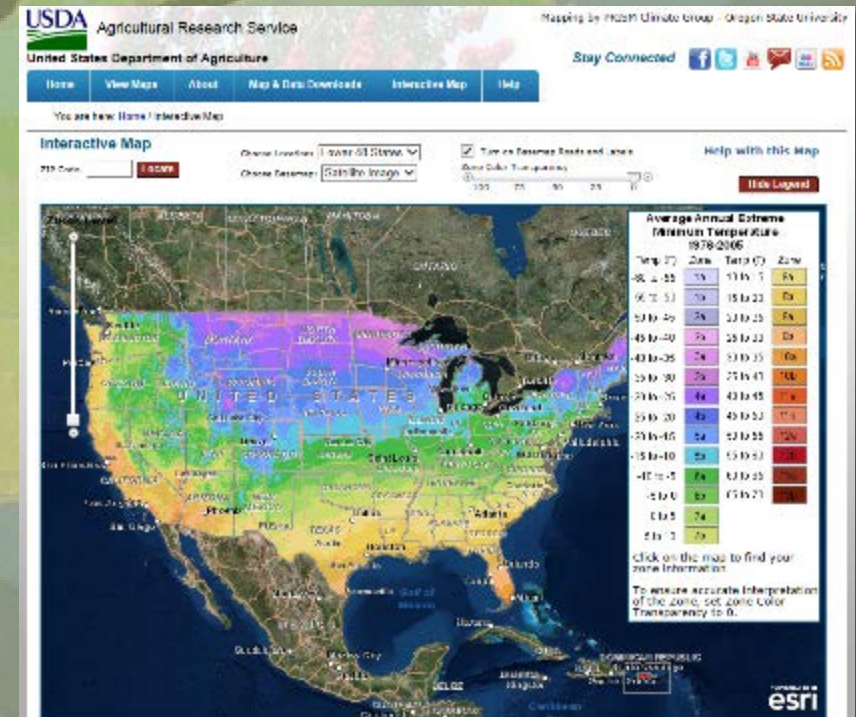


Agricultural
Research
Service

PHZM Data and Model Results Hosted on ArcGIS in the Cloud

Custom App Provides Public Access to the Data

Uses Basemap and GP Services from the Platform



WHO are the USERS...

....and what are their
business needs



Its all about business objectives

Providing value through GIS
technology

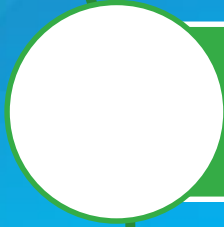
What are common themes for success...

- Need a clear vision and leadership
- Why? What is the business value
- Provide timeline and structure
- Good people
- Organization open to change

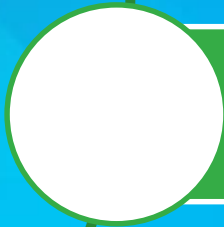
What are common themes for success...



Build on success of Initial Operating Capability



Right alignment of technology to business need



Clear data strategy – where does the data live



Clear communications



Understanding our world.