

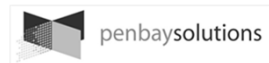
Our presenters



George Dailey

is the Education Administration/Operations Manager for Esri, the world leader in GIS.

gdailey@esri.com



Richard Koochagian

is the COO and Education Practice Lead for PenBay Solutions, the leader in facilities GIS.

rkoochagian@penbaysolutions.com

Esri – World's leading GIS company

Our Purpose

- Serve Users
- Advance Spatial Literacy
- Contribute to Society

Our Vision

- Global
- Geospatial
- Content
- Technical Support
- Education Services
- Professional Services

Our Status

- Strong Relationships
- 300,000+ Customer Organizations
- 42 Offices
- Global – 200+ Countries
- 1000s of Partners

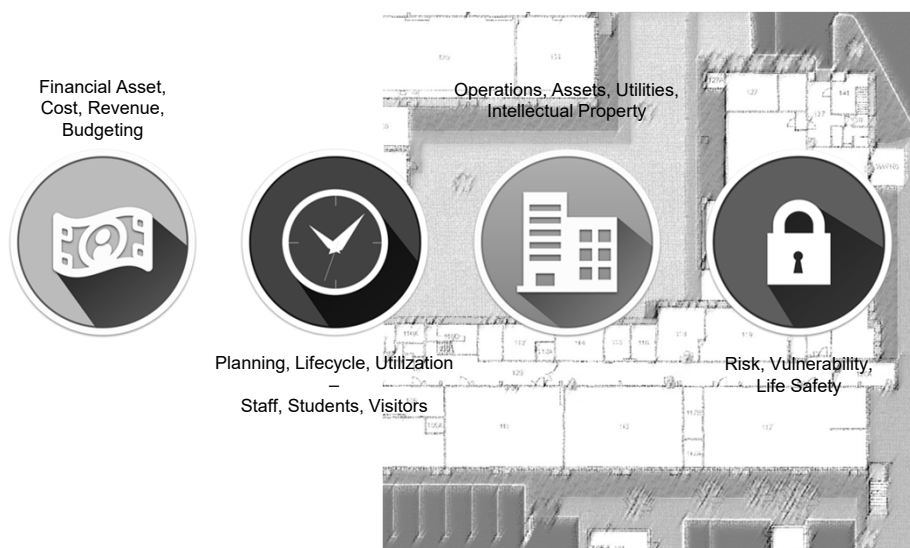
PenBay Solutions – Leading facilities GIS company



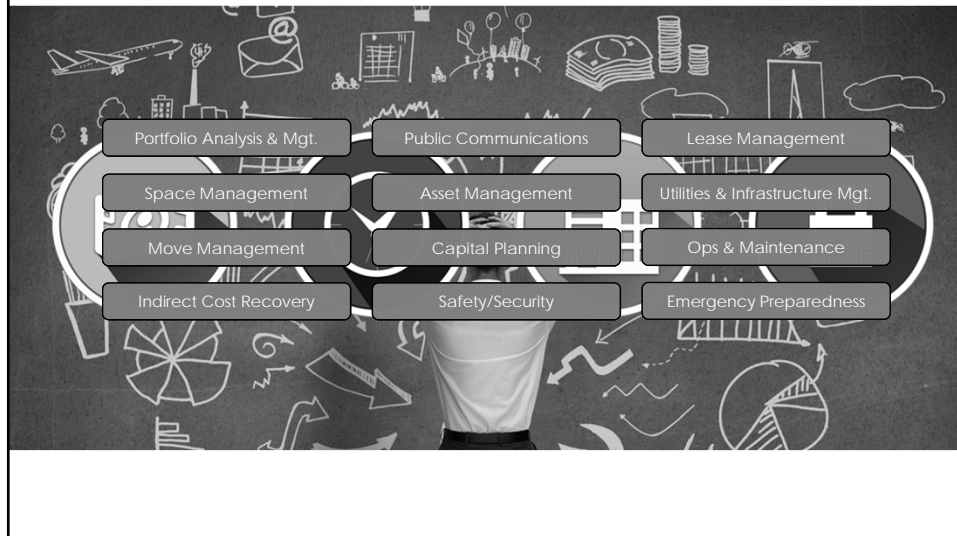
Session learning objectives

1. **Understand** why location can & should be used as the organizing principle for complex FM related information/data
2. **Examine** the unique ways a location-based technology approach solves challenges in FM/operations and safety & security
3. **Compare** facilities GIS implementation approaches that bring together data, systems, and departments
4. **Discover** facilities GIS technology ROI through real-world case studies

Facilities are mission critical



Managing facilities is complicated



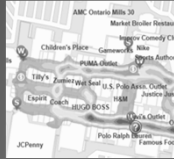
Facilities management business clusters



Portfolio and planning activities



Site selection & demographic analysis for property acquisition & disposal



Indoor space & amenity site selection



Real-time portfolio key performance indicator mapping



Building performance mapping & monitoring

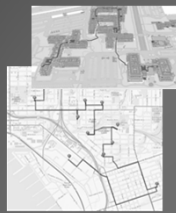


Space allocation & utilization

Operations and maintenance activities



Person, place, amenity locator, search/find "show me the path"



Optimized work scheduling, navigation, routing, wayfinding



Real-time indoor environment sensors, monitoring & alerts



Active, high priority work orders



Hot spots of increased service requests & work orders

Public safety and security activities



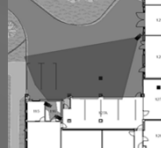
Natural hazard & continuity of operations



Risk assessment & planning



Event planning, safety, and security



Live camera feeds & view sheds

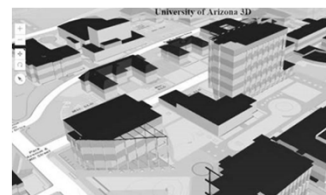


ADA compliance & emergency evacuation routes

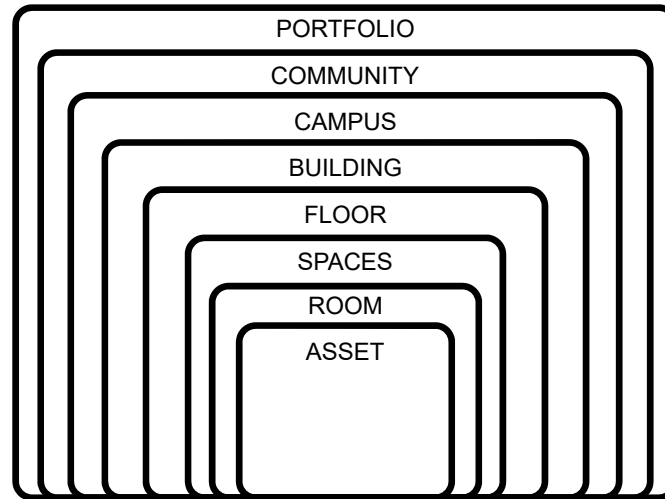
GIS provides a system of engagement

Through maps, apps, and geographic content, GIS is:

- Visual
- Quantitative
- Analytical
- Communicative
- Integrative



GIS | Integration across all scales



...seamless indoors and out

Why facilities GIS for FM?

Location: Creates order out of disorder

- Correlate diverse data using location as the “universal” index
- Improve data accuracy
- Enhance analysis/understanding
 - Visualizing information
 - Identifying patterns
 - Finding relationships
 - Detecting trends
- Enable efficient/effective workflows
- Report against data from multiple systems of record



Why facilities GIS for FM?

Location: Provides added value

Increase worth of existing data / system / process investments

- Allow existing information to support more than one purpose

Provide holistic views and reports

- Better decision making

Improve teamwork / communications

- Collaboration, transparency, productivity

Mitigate risk

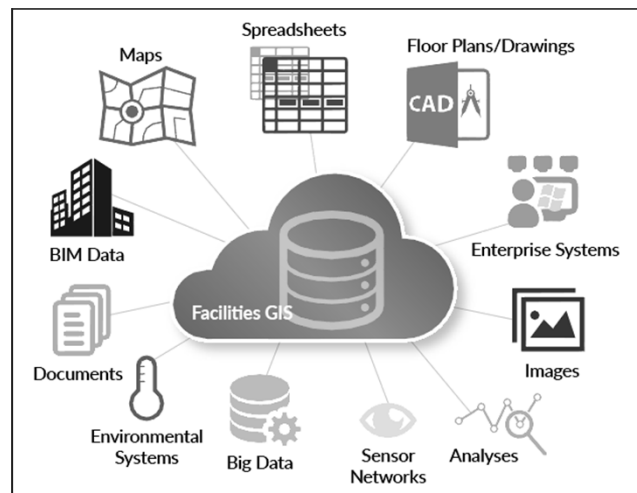
- Planning for/awareness of emergency and health situations

Save time and money

- Immediate access to necessary information



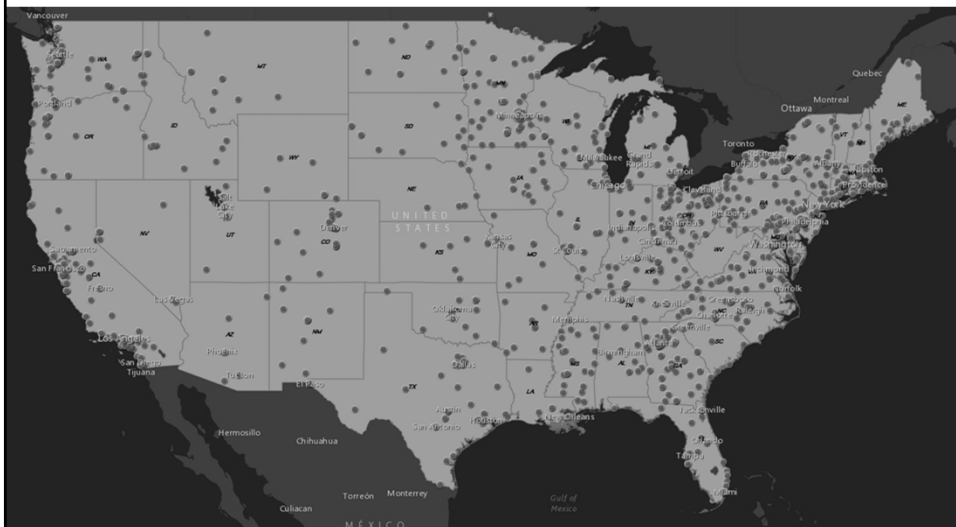
Facilities GIS =
Location + your data + your systems of record





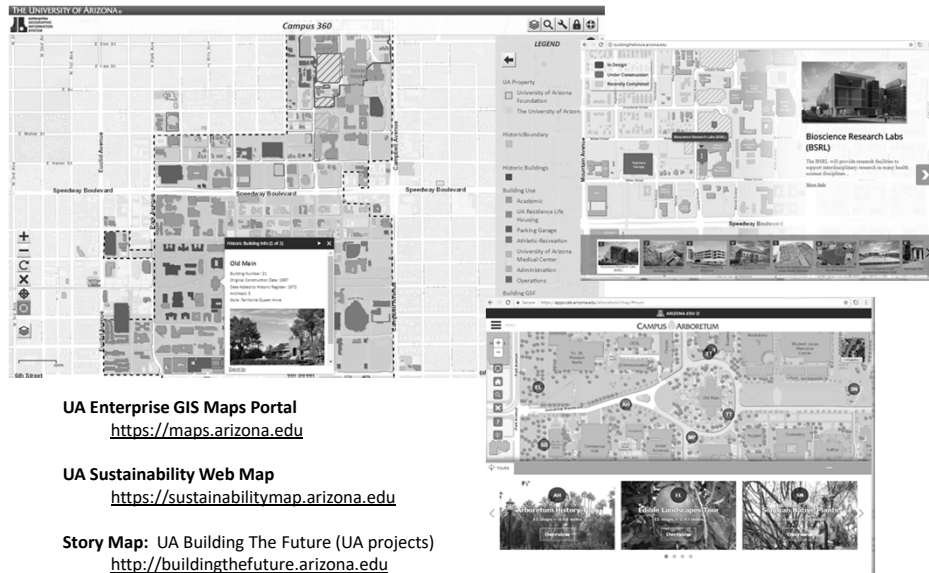
Facilities GIS in Action: Education Examples

Esri education site licenses: Pervasive

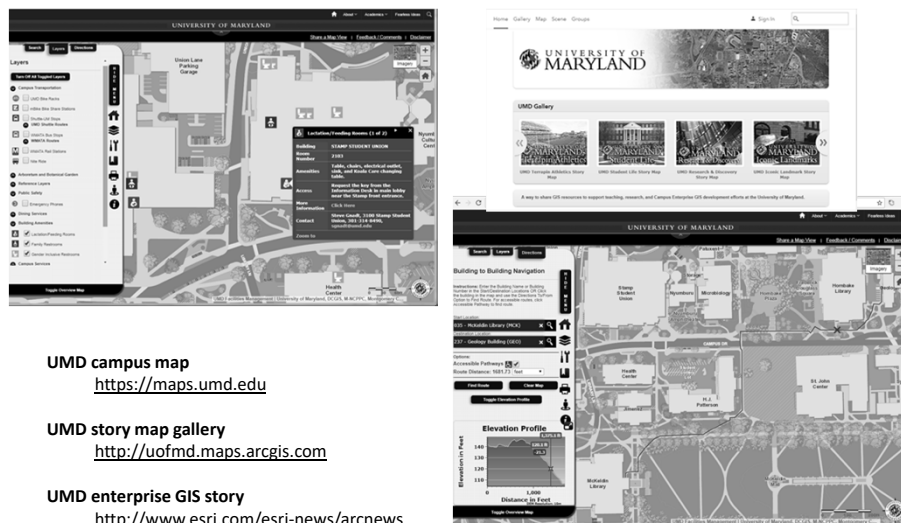


In the US alone, over 1,300 US colleges and universities

University of Arizona: Enterprise mapping, sharing...



University of Maryland: Curated geodata, interdepartmental collaboration, campus routing



University of Maryland: Curated geodata, interdepartmental collaboration, campus routing



UMD campus map
<https://maps.umd.edu>

UMD story map gallery
<http://uofmd.maps.arcgis.com>

UMD enterprise GIS story
<http://www.esri.com/esri-news/arcnews>



UMass-Amherst: Campus master planning, crowdsourcing, energy monitoring



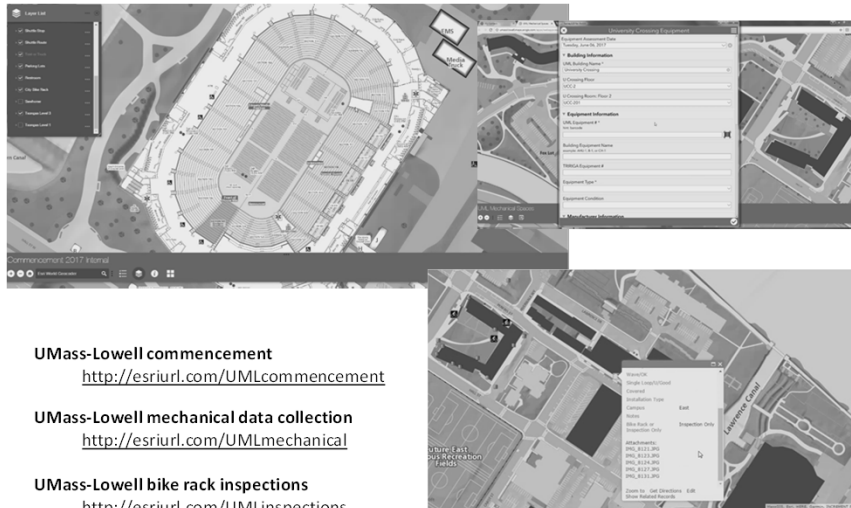
UMass-Amherst master plan explorer
<https://www.umass.edu/cp/master-plan-explorer>

UMass-Amherst campus projects
<https://www.umass.edu/cp/decade-renewal>

UMass-Amherst building energy explorer
<https://www.umass.edu/cp/green-campus-resources>



UMass-Lowell: Commencement, mechanical data collection, bike rack inspections

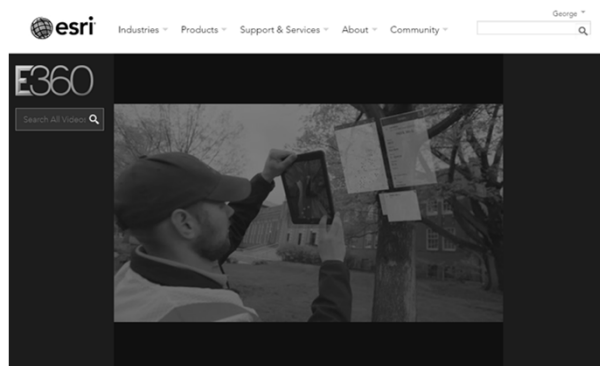


UMass-Lowell commencement
<http://esriurl.com/UMLcommencement>

UMass-Lowell mechanical data collection
<http://esriurl.com/UMLmechanical>

UMass-Lowell bike rack inspections
<http://esriurl.com/UMLinspections>

University of Minnesota: Trees, infrastructure, beyond

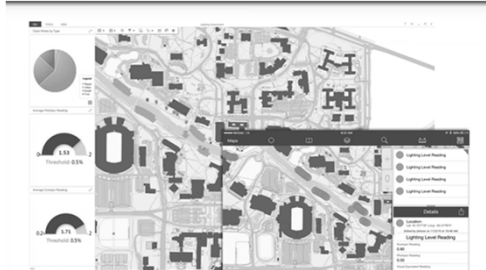


University of Minnesota Campus Facilities

The University of Minnesota is a thriving center of learning and research with over 50,000 students. It also is a very large place covering over 2,000 acres with hundreds of buildings, miles of infrastructure, and tens of thousands of assets. Creating and sustaining the campus is the mission of University Services and ArcGIS is vital to it.

<http://video.esri.com> > search = Minnesota

Michigan State: Streamlining field operations



Employee Engagement

“At the end of the day when we come back to turn in our timecards and punch out, everyone passes by the dashboards and it's motivating to see how much work you did today and think about whether you can do a little more tomorrow to move the needle going forward....”

<http://www.cfda.org/online-webinars>

Curtin University: Campus, spaces, integration



University of Alabama-Birmingham: Connecting disparate data, indoor/outdoor awareness



Puyallup School District: Locational intel, space awareness, building insight and action



Location, Location, Location

There is immeasurable value in using location as the organizing principle for Facilities data -

- Location can and should be used as the organizing principle for complex FM related information/data
- Location-based technology approaches solve challenges for FM/operations and safety & security
- Location focused solutions bring together data, systems, departments, and people
- Facilities GIS technology provides ROI as seen through real-world case studies

Thank you



George Dailey

gdailey@esri.com



Richard Koochagian

rkoochagian@penbaysolutions.com