



CIM and 3D

A Model-centric Focus

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Do we still need to plan and scope projects the same way we did 20 years ago?

Do we need to design projects following the same workflow as we did 30 years ago?

Do we still need to construct projects with the same processes used 40 years ago?



Where we are with Civil Integrated Management

Our workflows tend to be serial, in an information silo, following an analog printed/written process.



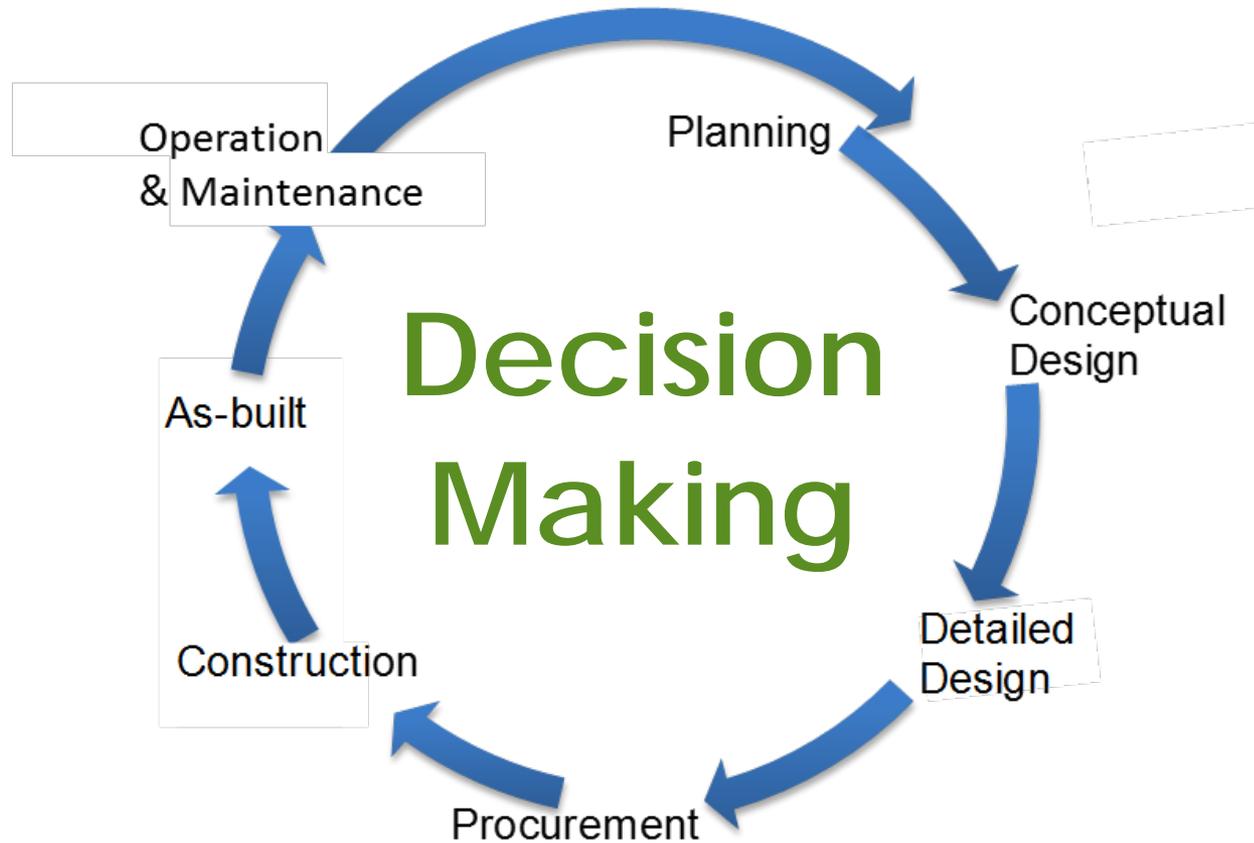
Civil Integrated Management (CIM)

CIM is the collection, organization, managed accessibility, and use of accurate data and information throughout the life cycle of a transportation asset.

The concept may be used by all affected parties for a wide range of purposes including planning, environmental assessment, surveying, construction, maintenance, asset management, and risk assessment.



CIM and the Circle of Life



CIM, What is it?

- CIM is not one application, but a collection of applications that work seamlessly.
- CIM is a mindset
- CIM builds on building information model



CIM, Why would we want this?

- Limited resources
 - Need to work on the right project, with the right resources, to achieve optimal results.
- The world is becoming digital.
 - We should take advantage of this as much as possible, based on benefits
- Integrating new technologies with data, at the right time; improves processes and decisions
- The digital model becomes the base for all work, from planning through design and construction into and through maintenance and operations, and back to planning.

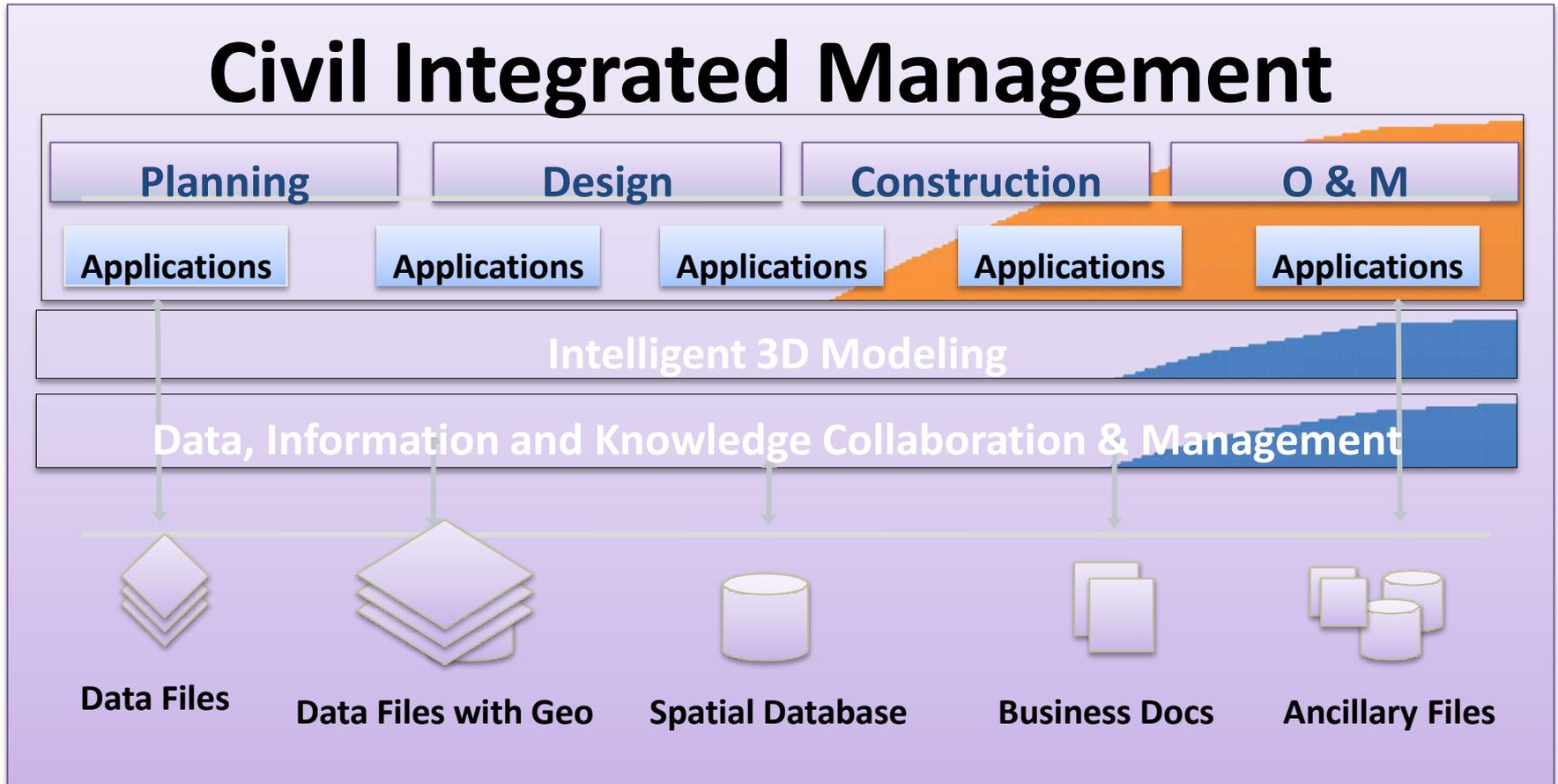


CIM, Who is impacted with this?

- All aspects of Transportation, from planning through design and construction into and through maintenance and operations, and back to planning.
- Agencies, consultants, contractors, and public
- So, if you work on or with Highway Projects, you are affected.



CIM, An Architecture View



Solution Architecture View

CIM, Next steps

- Current internal projects for two key elements of CIM
 - Content and Data Management
 - Creating a 3D model-centric environment
- Build from enabling technologies



“The core building blocks of CIM are 3D Engineered Models, which are compatible with technologies such as LIDAR.....”

Advances in Civil Integrated Management (CIM)

2014 Design Training Expo

Duane F. Brautigam. P.E., Director, Office of Design,
Florida DOT

3D Everything

3D, Current state in ODOT

- Roadway producing a 3D model for all projects with earthwork
 - Unless there is an exception.
- Bridge is looking a software to enable the creation of the 3D model
 - Looking at software such as LEAP Enterprise
- Multiple disciplines looking a creation of 3D cell libraries.



3D, Next Steps in ODOT

Working with the other disciplines

- Need to identify process concerns
- Need to identify potential tools
- Need to automate the creation of the models to the extent feasible.

Management has agreed that this is the direction the department should go.



Questions?



Thank You!



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