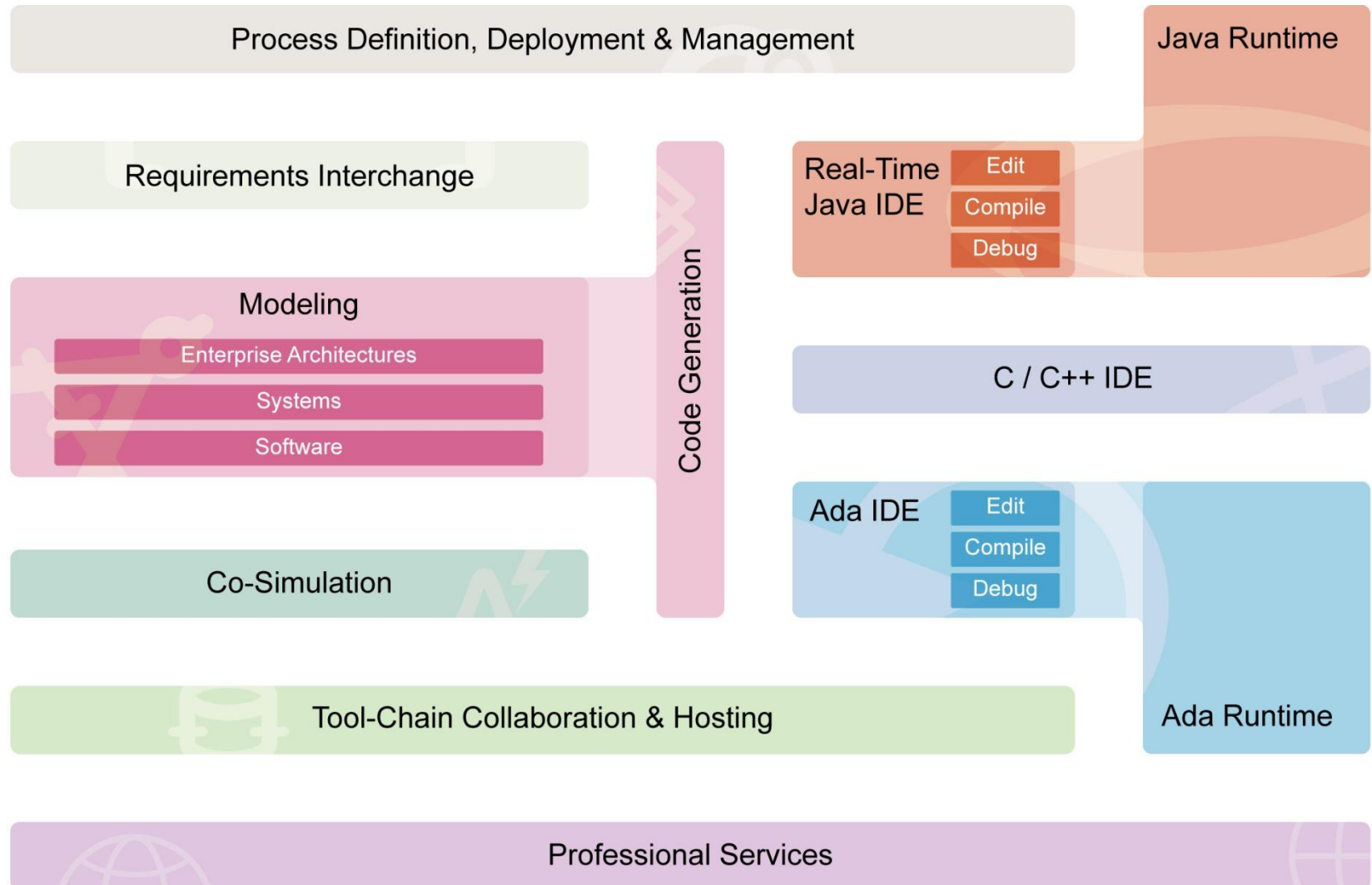# Atego MBSE Frontiers

James Hummell, Principal Engineer

Overview

- MBSE/SysML advancements and challenges

- Benefits and current issues of using MBSE/SysML

- Exciting MBSE/SysML opportunities

Atego Products

Process Definition, Deployment & Management

Java Runtime

Requirements Interchange

Real-Time Java IDE
- Edit
- Compile
- Debug

Code Generation

Modeling
- Enterprise Architectures
- Systems
- Software

C / C++ IDE

Ada IDE
- Edit
- Compile
- Debug

Co-Simulation

Tool-Chain Collaboration & Hosting

Ada Runtime

Professional Services

Atego Products

MBSE/SysML advancements and challenges

- What are:

- a. The main MBSE/SysML advances Atego has seen?

    - SysML has a wider acceptance in industry

    - Model execution

- b. The main MBSE/SysML challenges customers have faced?

    - Changing the minds of the current engineering staff.

    - Cost of start up.

Benefits and current issues of using MBSE/SysML

- What are the key MBSE/SysML aspects you see with Atego's customers today regarding:

- Issues the customers are having? [with today's SysML/MBSE technology base as a whole]

    - Language usage and understanding

- Benefits they are seeing?

    - Collaboration

    - Document generation

    - Automated design review
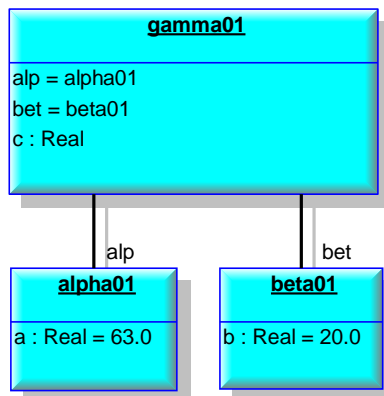
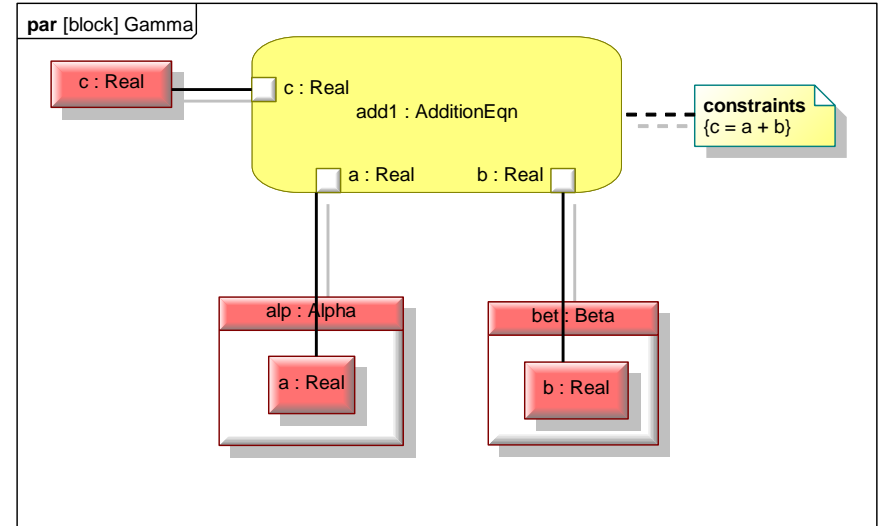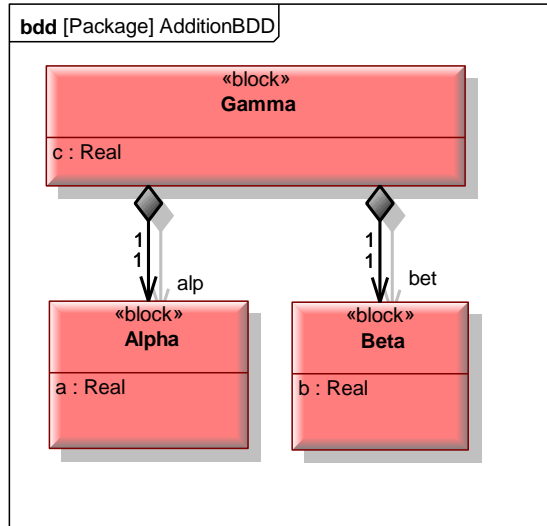# Modeling - Analysis and Design

- Scalable OMG UML, SysML, UPDM (DoDAF/MODAF) Modeling

- Repository Collaboration

- Built-In Traceability

- Document Generation

- Automated Design Review

- Code Generation & Sync
  C, C++, C#, Java, Ada
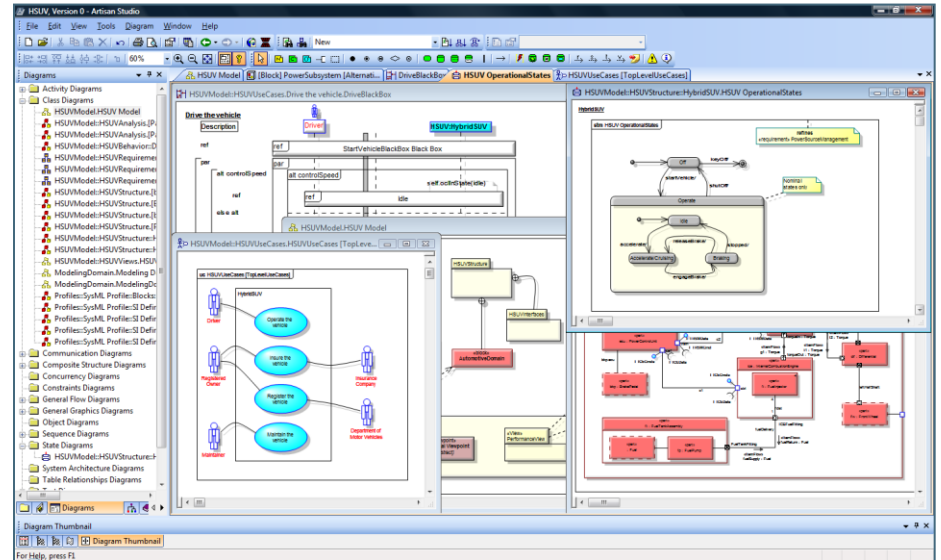
- Improved Quality through Early Design Review and Consistency

- Bring Systems to Market Faster with Parallel Design Effort

- Cost Reductions from Design and Development Automation
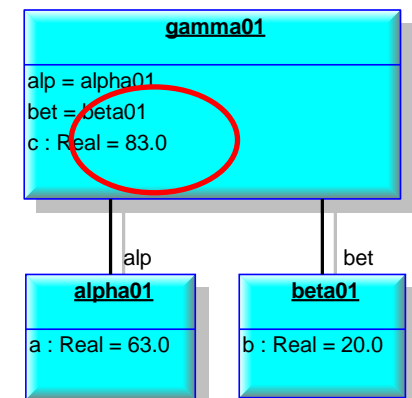
Model Execution/Analysis

- bdd
- par
- od

Exciting MBSE/SysML opportunities
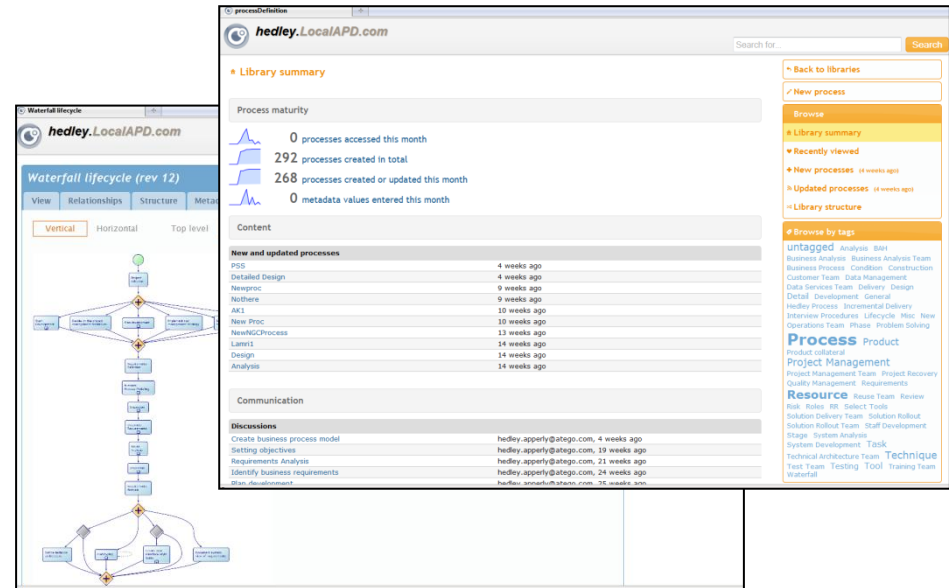
■ What exciting MBSE/SysML opportunities do you foresee over the next several years?

Three fundamental concepts

```
1    ┌─────────────────────┐ 1                    1..* ┌─────────────────────┐
     │      Process        │─────────────────────────  │        Tool         │
     └─────────────────────┘         drives ▷          └─────────────────────┘
```

enables ▲

```
1..* ┌─────────────────────┐
     │       Person        │
     └─────────────────────┘
```
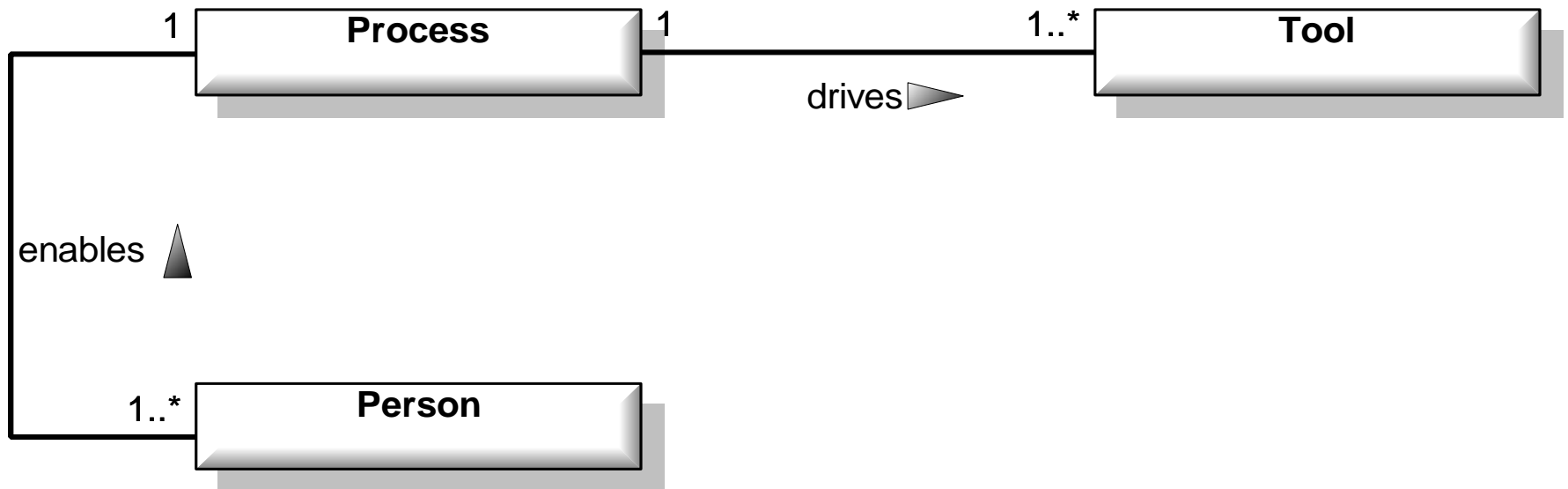
Process Authoring and Rollout

- Process Inventory in the Box

- Process Design / Authoring Tool

- Agile Process Wizard
  - Project specific process instantiation / tailoring

- MS Project Plan Generation

- Process Deployment
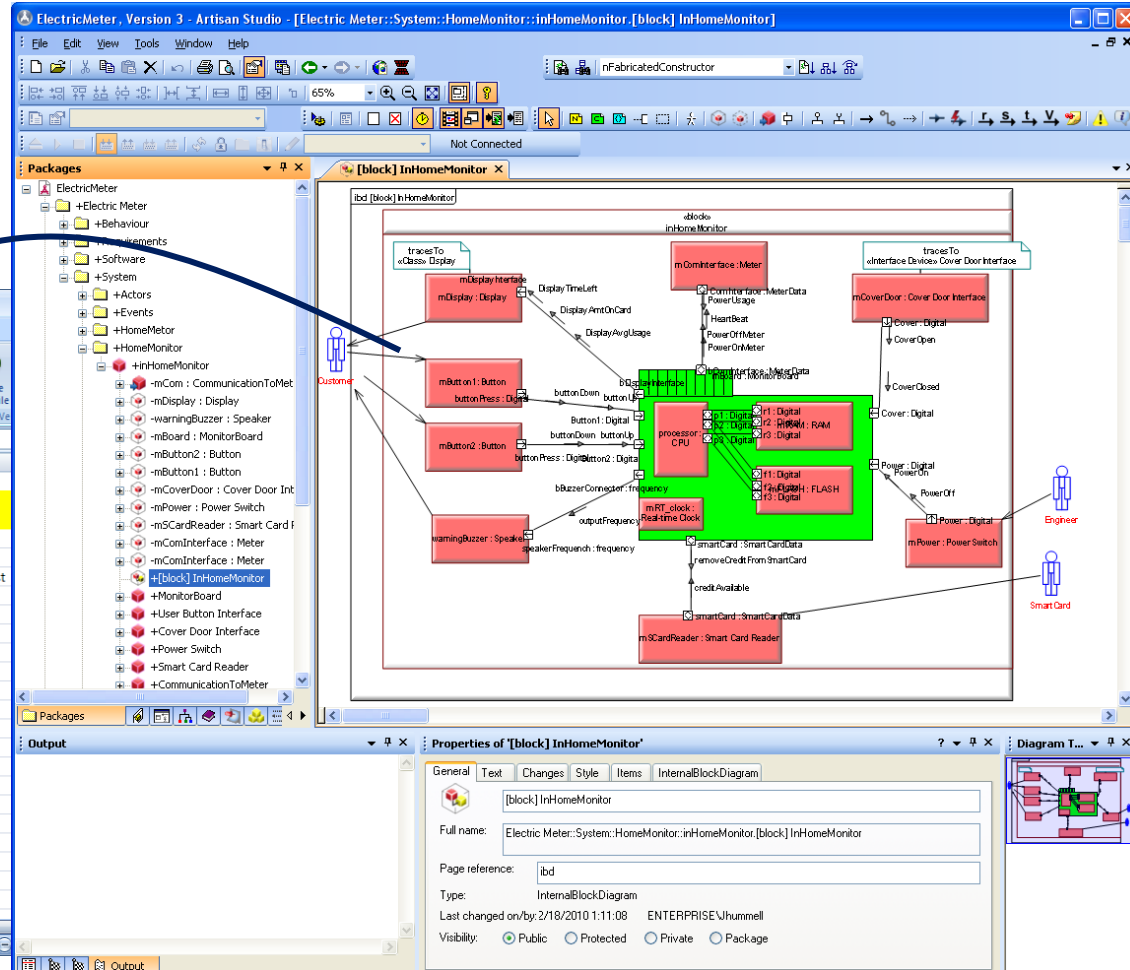 - To Do Home Pages
  - Automatic Email Notification

- Merge Industry Best Practices and your Experience to improve Quality

- Achieve the Promised Productivity Improvements from your Processes

- Reduce Costs of Process Definition and Rollout

Data Mining/Data Analysis

■ Generate traditional
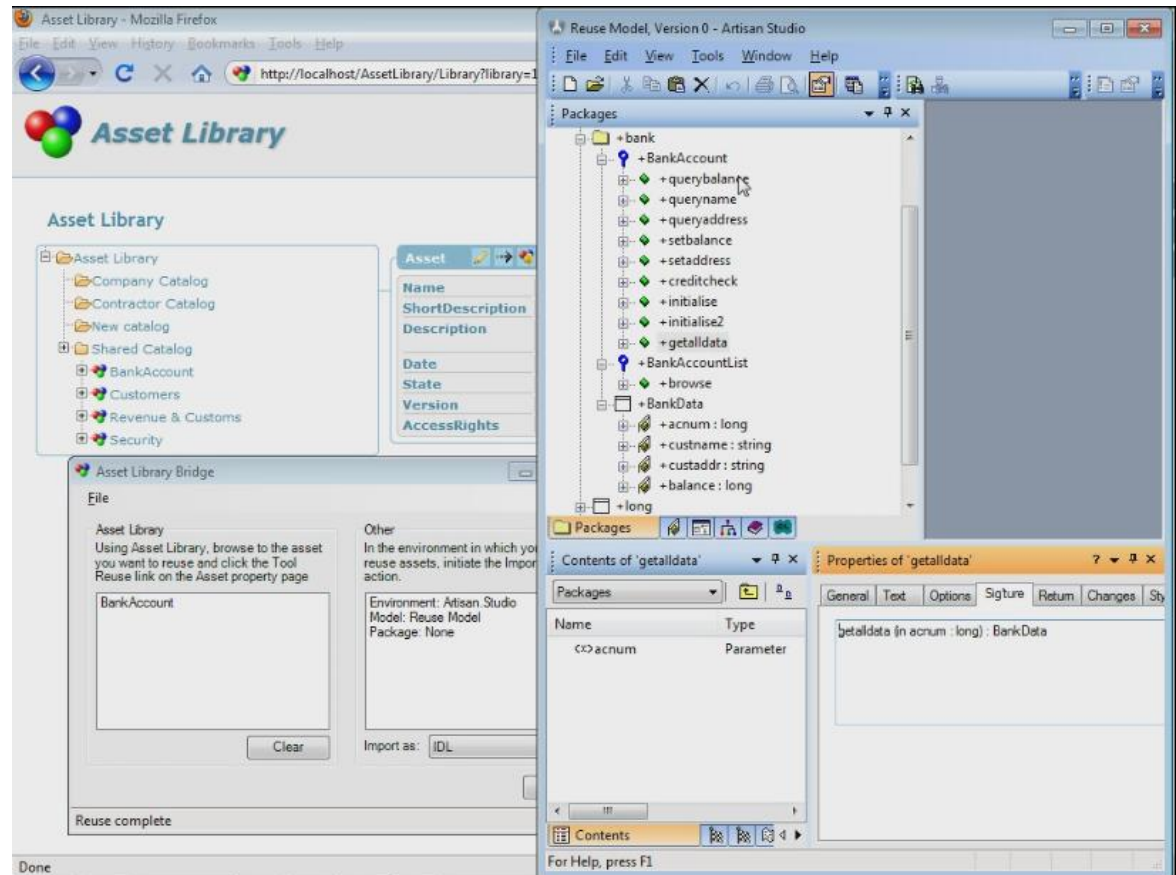Systems documentation
from modeling information

Asset Library

- Asset Library is an essential tool for enabling reuse

- Ability to build a reusable library of components to keep all systems data for future systems development.

Further Information

- To contact the presenter:

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- For more on training, webinars, tools and professional services:

  www.Atego.com

- To download an evaluation of Artisan Studio:

  www.atego.com/download-center/product/artisan-studio

- Contact us:

  www.atego.com/company/contact-us

  info@atego.com