**A Common Language for Our Data: Introducing the REO Modeling Patterns**

**Sub-headline: As part of the RTX Enterprise Ontology (REO) initiative, a new library of modeling patterns is now available to help teams build consistent and connected knowledge graphs across the enterprise.**

**[CITY, STATE] – [DATE]** – As our projects grow in complexity, so does our data. Teams across design, manufacturing, MRO, and supply chain are building powerful digital models to capture their expertise. A common challenge, however, is ensuring these different models can talk to each other. How do we connect the dots between a component in a design model and its maintenance schedule in a sustainment model?

To help solve this, the Enterprise Modeling team, as part of the broader **RTX Enterprise Ontology (REO)** initiative, is pleased to introduce the **Enterprise Modeling Pattern Library**. This is a practical resource designed to help engineers and developers model their domains with greater consistency and efficiency.

The goal is to establish a set of common, reusable classes and relations. By using these standardized patterns, the knowledge graphs we build will share a foundational vocabulary, enabling us to ask complex questions that span multiple domains.

**Reusing Expert Work, Not Reinventing It**

A significant amount of technical work already exists in standards like the Basic Formal Ontology (BFO) and the Industrial Ontologies Foundry (IOF). Our modeling patterns package this expert knowledge into easy-to-use guides. They provide a clear, standardized way to represent common scenarios, saving project teams time and ensuring their work aligns with proven best practices.

**Inside a Pattern: A Practical Example**

Each pattern in the library is a concise, 2-to-3 page document designed for direct application. Let's look at one of the foundational patterns: **"Pattern: Components of an Assembly and their Roles."**

The objective is to model not just the physical parts of an assembly, but also the *function* or *role* each part plays. This distinction is critical for connecting engineering, supply chain, and MRO data.

*Caption: Each pattern is a short, structured document. It provides a clear objective, a relatable scenario, and a description of the solution, as seen in this example from the "Assembly and Component" pattern.*

The pattern then provides a clear diagram showing how to connect these concepts. It specifies which classes and relations to use, such as bfo:MaterialArtifact for the physical object and iof:MaterialComponentRole for its role.

*Caption: This diagram from the pattern visually separates an object's physical composition from its business role. This common structure is key to connecting different knowledge graphs.*

**From One Pattern to Enterprise-Wide Insight**

This is where the power of the REO initiative becomes clear. Once an assembly is modeled correctly using this one pattern, it becomes a standardized object that can be used by other, more advanced patterns. We can now apply the:

* **Material Traceability** pattern to track its components from the source.
* **Financial Value** pattern to associate its acquisition or manufacturing costs.
* **Scheduling** pattern to plan its installation into an aircraft during a specific flight segment.

This layered approach allows us to build incredibly rich, interconnected digital representations of our products and processes.

**A Comprehensive Library to Support Your Work**

The "Assembly and Component" pattern is just one of many. The library provides foundational patterns for universal concepts, but also a growing collection of patterns for complex, high-value scenarios. The full library includes patterns for:

* Modeling Assemblies and Components
* **Material Traceability**
* **Equipment Efficiency (OEE)**
* **Scheduling and Resource Allocation**
* **Specification Comparison**
* Modeling Clock Time and Process Duration
* **Quality Management and Non-conformance**
* **Replenishment and Spare Part Orders**

By providing vetted solutions for these common challenges, we can accelerate our projects and ensure the resulting data models are robust and interoperable.

**An Invitation to Collaborate**

This library is a core component of the RTX Enterprise Ontology, and we see it as a living, collaborative effort. Its success depends on your expertise and feedback.

We invite you to explore the library and use these patterns in your work.

* **Need to model something?** Start by checking the library for a relevant pattern.
* **Have questions?** We are here to help you apply these patterns to your specific project needs.
* **Don't see a pattern you need?** Your feedback is essential for identifying gaps and developing new, useful patterns for everyone.

By working together to adopt this common modeling language, we can significantly improve the connectivity of our enterprise data and realize the full potential of a truly integrated digital thread.

**To access the REO Pattern Library, ask a question, or schedule a brief consultation, please contact [Your Team's Email Address, e.g.,** [**modeling-coe@ourcompany.com**](https://www.google.com/url?sa=E&q=mailto%3Amodeling-coe%40ourcompany.com)**] or visit our documentation site at [Link to Internal Confluence/SharePoint Site].**