Example: AvantComposite and Customer-Centric Ontological Transformation

Let's consider AvantComposite, a fictional manufacturer specializing in advanced machinery for composite materials processing in the aerospace industry. Founded decades ago as a traditional machinery producer, the company has evolved by progressively adding new product lines to address evolving market needs.

The Pre-Transformation State

AvantComposite currently exhibits an organizational structure typical of many legacy manufacturing companies:

- Product-centered rather than customer-centered organization: The company is structured around four main product-based divisions (Cutting Systems, Forming Systems, Assembly Systems, Finishing Systems), with limited visibility into customers' actual needs
- **Non-modular solutions**: Each division develops complete vertical solutions with minimal sharing of components or approaches between divisions
- Internal language vs. customer language: Technical and commercial documentation uses company-internal terminology rather than the language of customers and their markets
- Slow market response times: The company takes several months to respond to significant customization requests because it must "translate" customer needs into its organizational terms

Customers must adapt to the company's organizational structure rather than the other way around. When an aerospace client requests an integrated solution for a specific challenge (such as "reduce component weight while maintaining structural integrity"), AvantComposite responds by fragmenting that need according to its product divisions, losing sight of the customer's overall problem.

The Transformation Process

AvantComposite's leadership can initiate change starting with the customer. The first step would be extensive ethnographic research with key customers to map their actual needs and processes. This research would likely reveal that customers don't think in terms of "cutting systems" or "forming systems," but in terms of outcomes and capabilities: "How can I work with this new material?", "How can I ensure precision?", "How can I reduce weight while maintaining strength?"

Based on this customer-centered understanding, the company could undertake a project to completely reorganize itself:

- 1. **Mapping real customer needs**: Identifying the fundamental problems customers are trying to solve, regardless of technology
- 2. **Reorganization based on capabilities aligned with needs**: Identifying key capabilities that directly correspond to customer needs:
 - Precision Cutting Capability (addressing the need: "I want components with minimal tolerances")
 - Thermal Forming Capability (addressing the need: "I want to shape thermoformable materials while maintaining properties")
 - Materials Composition Capability (addressing the need: "I want to combine different materials for specific properties")
 - Robotic Assembly Capability (addressing the need: "I want to assemble complex components with precision and repeatability")
 - Quality Control & Customer Experience Capability (addressing the need: "I want guarantees that components meet specifications and ongoing support")
 - Systems Integration Capability (addressing the need: "I want a complete solution that works in my production environment")
- 3. **Creating need-centered organizational units**: Each capability consolidated into a distinct organizational unit that speaks the customers' language, with its own operational autonomy, dedicated commercial team, and independent P&L
- 4. Standardized triple interfaces based on customer usage contexts:
 - **Technical interfaces**: APIs and standardized integration protocols based on customers' actual workflows
 - **Contractual interfaces**: Modular pricing models and SLAs aligned with customers' business outcomes
 - **Operational interfaces**: Collaboration processes that reflect customers' product development cycles
- 5. **Outcome-driven configuration system**: Developing a system that starts with the customer's desired outcomes and automatically composes the capabilities needed to achieve them

Potential Results of Ontological Arbitrage

Such a transformation could create significant competitive advantages:

- Alignment with customer language and needs: Customers could express their needs in their own language and the company could respond directly without internal "translations," substantially reducing misunderstandings



- **Opening to the external market**: Each capability unit could serve both internal and external customers, diversifying revenue sources and accelerating innovation through direct market feedback
- **Configuration speed**: The time required to configure a customized solution and commercial offer could be dramatically reduced because the organization and systems would be aligned with customers' actual needs
- **Contractual automation**: Standardizing results-based contractual interfaces could reduce legal negotiation time, allowing for quick composition of complex agreements
- **Expanded Customer Experience role**: The Quality Control & Customer Experience unit could evolve to become the primary interface with customers, offering quality management, after-sales support, and application consulting, generating a new service revenue stream

In an illustrative scenario, an aerospace customer presents a challenge: "We need to reduce component weight while using a new titanium-ceramic composite, maintaining the same structural characteristics."

In the old model, this request would be fragmented across product divisions, losing the big picture. With the new capability-based model aligned with needs, AvantComposite could:

- 1. Immediately translate this challenge into the necessary capabilities (Materials Composition, Precision Cutting, Quality Control)
- 2. Use the commercial configuration system to compose a modular offer focused on the desired outcome
- 3. Provide the customer with the flexibility to purchase the entire solution or only the specific capabilities needed

This approach could allow AvantComposite to win significant contracts while competitors are still trying to adapt customer requests to their rigid organizational structures. Moreover, the capability units involved could subsequently develop independent offerings for other customers with similar challenges in different sectors (automotive and medical), opening new market segments that would be inaccessible with the previous organizational model.

Over time, this approach could allow the company to gain substantial market share from less agile competitors and increase revenue significantly, thanks to the ability to respond directly to customer needs through well-defined modular capabilities.

Ontological arbitrage would allow AvantComposite to operate at a speed that competitors cannot match - not because it has superior technology, but because its customer-centered ontological clarity, standardized interfaces, and modular capability-based organizational structure would allow it to respond directly to the problems customers are actually trying to solve.