Collaborative Sourcing:

Sourcing Components and Capabilities through Knowledge-Enabled Marketing Encyclopedias

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Technologies for Enterprise-Wide Engineering Program

Web-enabled Tools for Real-time Knowledge Projects

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Supplier Relationships Changing

From:

- Contract Manufacturing for Single OEM
- Sales to one customer driven by annual contractual allocation

To:

- Contract Design and Standards-based Manufacturing for Multiple OEMs
- Sales to multiple customers driven by monthly/weekly/hourly demand

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Sourcing Drives Supplier Sales...

...Not Annual Plan

- Greater design responsibility
- Less reliance on cash-cow OEM
- Multiple customers
- Fluctuating demand
- Thinner (standards-based) margins

Suppliers must work harder to market to specifying engineers to ensure economies of scale required by this new model.

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Sourcing Drives OEM Engineering...

...Success of a design project driven by ability to deliver:

- Right Knowledge to the
- Right Specifying Engineers at the
- Right Time
- Across multiple supplier and OEM teams

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Increased Need for Common Knowledge

- Design Level Outsourcing
- International Outsourcing
- Shortened Design Cycles
- Tighter Quality Tolerances

Dramatically increase the need for shared detailed component and capability knowledge

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Collaborative Sourcing

Multiple Suppliers and OEM Teams working together to resolve join design problems using existing and potentially new components and capabilities.

- OEM Specifying Engineers
- Supplier Sales Support Engineers
- OEM and Supplier Manufacturing Engineers
- OEM and Supplier Service Engineers
- OEM and Supplier Support Engineers
- Supplier Sales Managers
- Supplier Marketing Managers
- OEM and Supplier Logistics Managers

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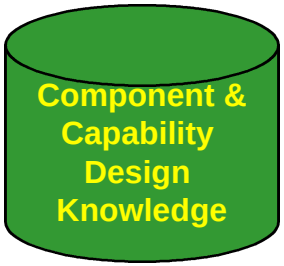
Insular Communities

Virtually no tools for reusing and communicating component and capability design knowledge outside of engineering.



Team members from manufacturing, services, sales, marketing, upstream suppliers and downstream customers unable to access this critical product knowledge.

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Supplier Marketing Controls Access

Sales and Marketing traditionally control the flow of product information beyond the borders of the company.

Sales and Marketing are likely to control sourcing access to detailed component and capability knowledge.

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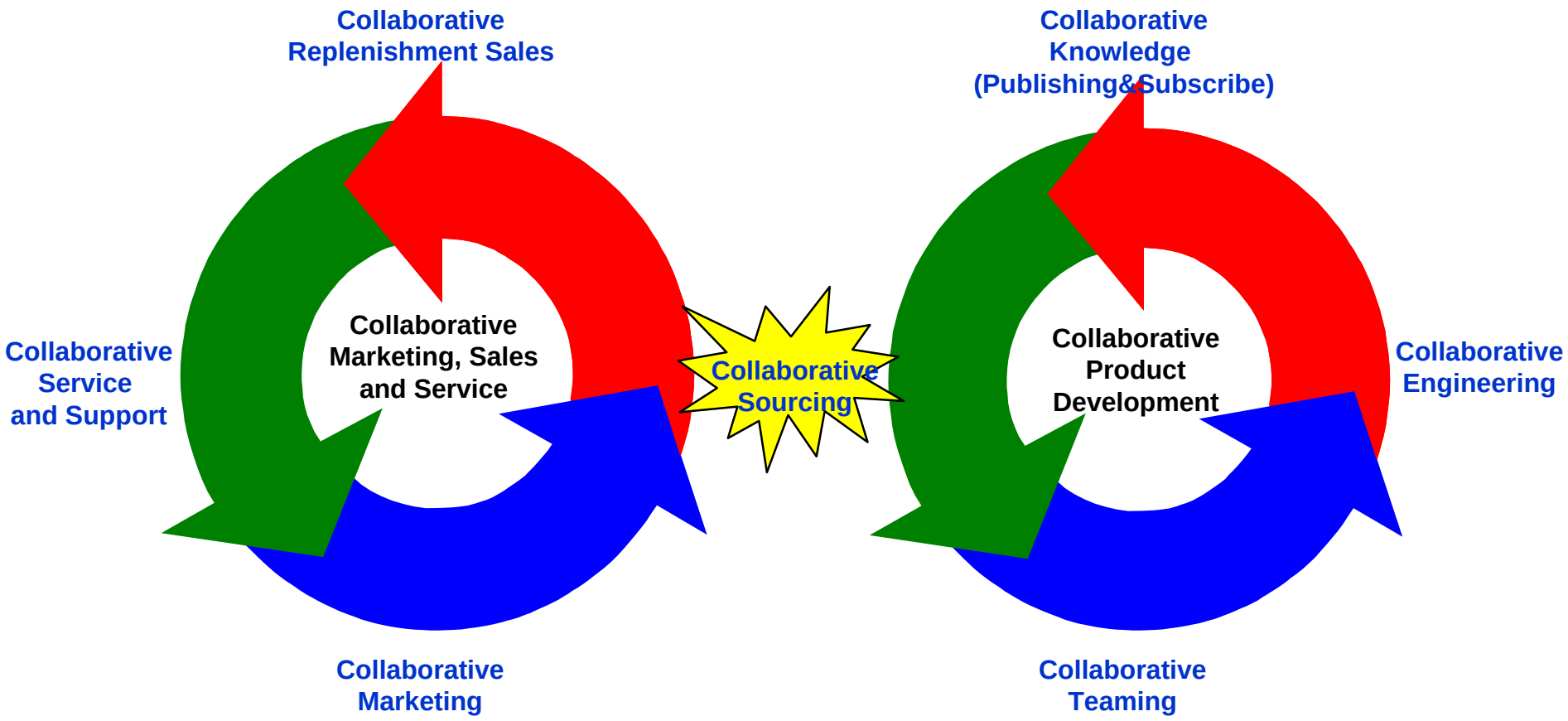
Collaborative Sourcing



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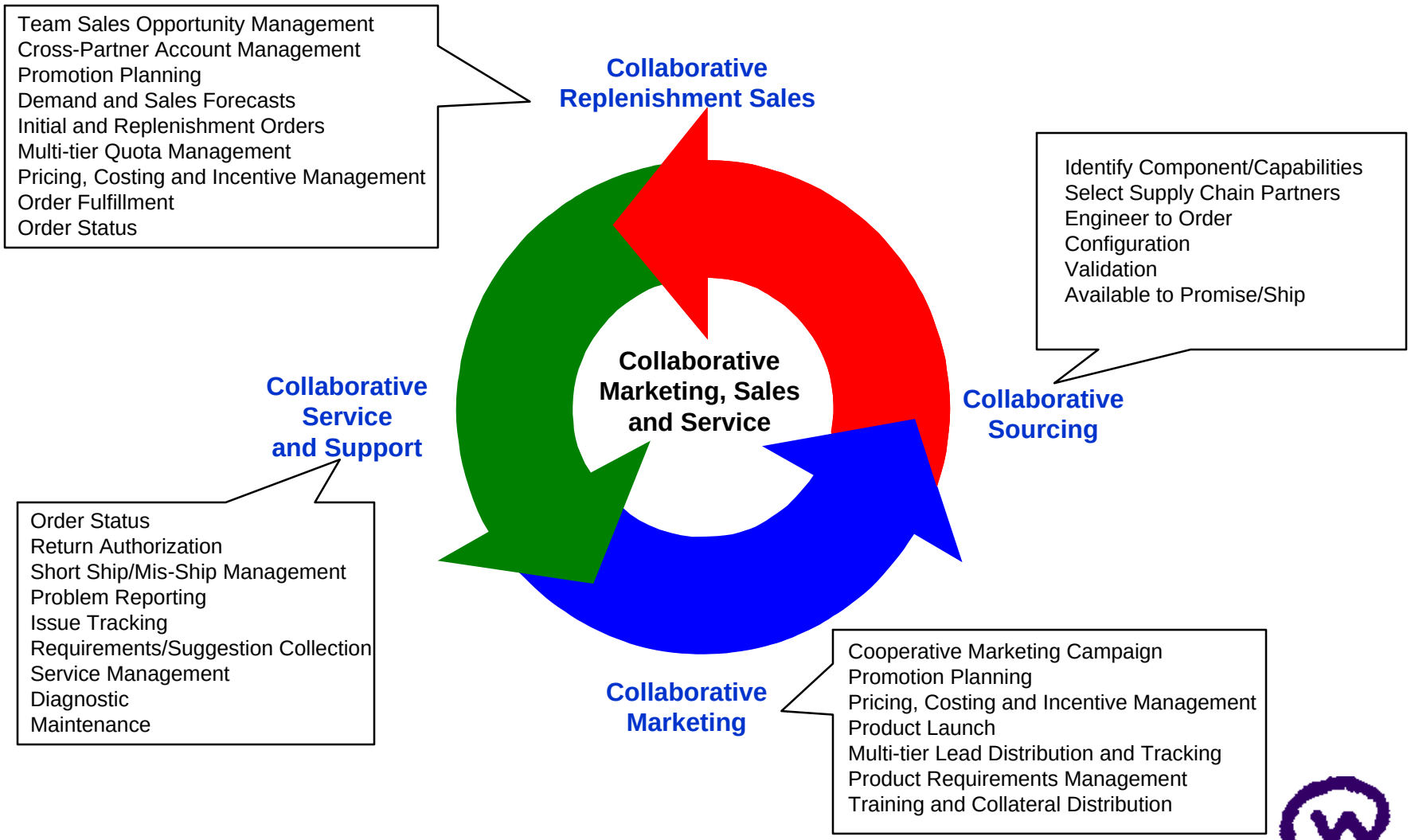
Collaborative Marketing, Sales & Service



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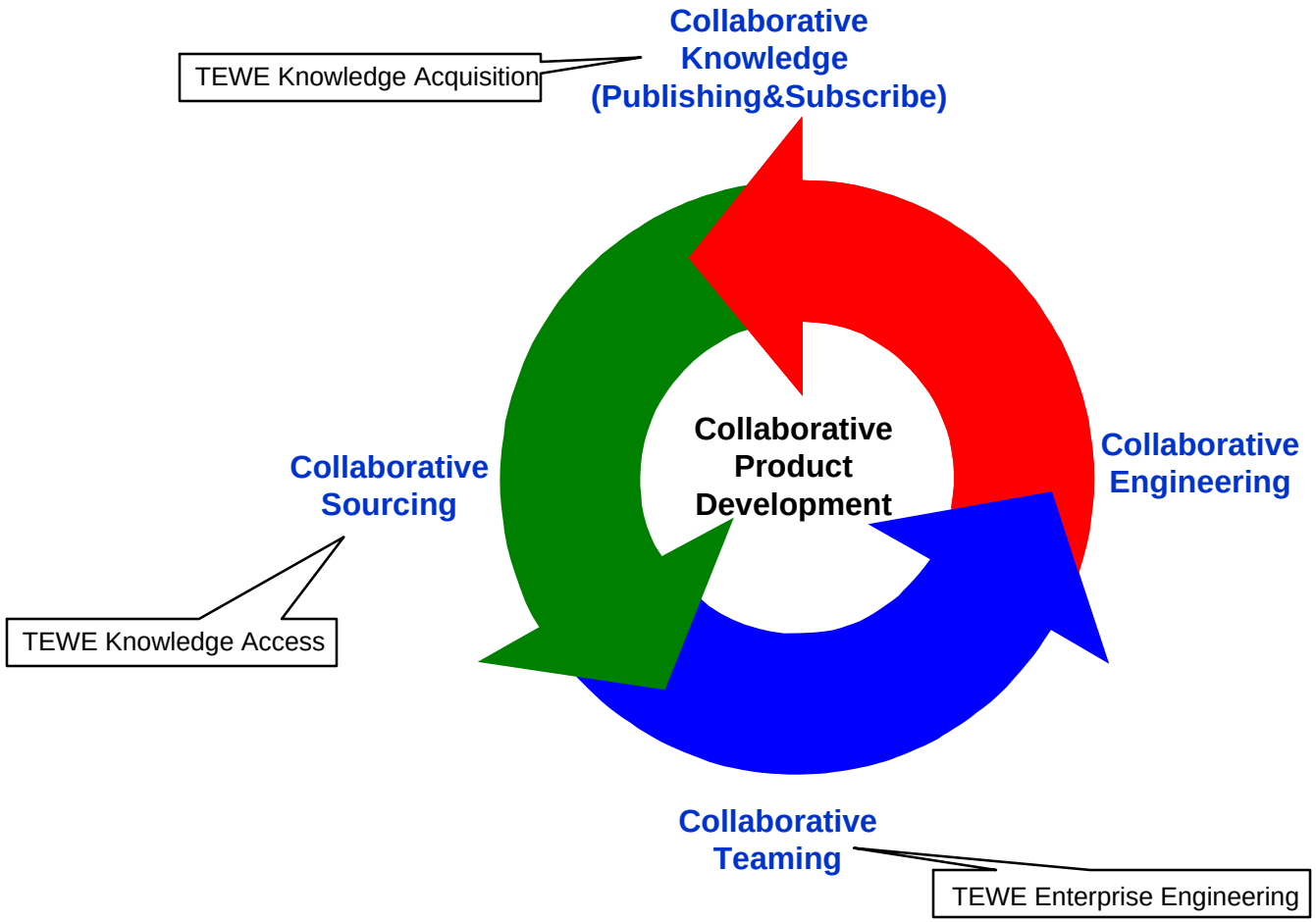
Collaborative Product Development



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TEWE Product Knowledge

- "Smart Parts"
  - Knowledge of what a component product is and does
- "Smart Capabilities"
  - Knowledge of what a supplier can potentially produce

Creator, Dates, Geometry, Attributes, Features, Descriptions, Technical Specifications, Core Competencies, Process Descriptions, Sourcing Strategies, Forecasts, Plans....

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Web-enabled Knowledge Tools

- Ability to access information critical to product development and support
- Ability to securely control who has access to which information
- Ability to control how information is to be displayed for specific users/roles
- Ability to control who can change or redistribute information

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Knowledge-Enabled Marketing Encyclopedia

- Product Marketing presentation of Component/Capability Features
- Exchange Component/Capability Knowledge
- Knowledge-based parametric search for Component/Capability
- Access to Knowledge in Multiple Sources (PDM, CAD, ERP, MRO, etc.)
- Support multiple formats (text, graphics, XML, etc.)
- Display Component/Capability Knowledge

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TEWE Sourcing Projects

- Visual Representation of Smart Parts
  - Establish secure sales-oriented extended enterprise
  - Basic Component/Capability Catalog
  - Hierarchical & Attributed-based parametric search
- Knowledge Source/Sink Integration
  - Process Knowledge
  - Component/Assembly Knowledge
  - Design Constraint Knowledge
- Smart Capabilities Knowledge Representation
  - XML + EXPRESS?
  - Capabilities Characterization

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TEWE Sourcing Projects, cont.

- Smart Parts/Capabilities Knowledge Indexing
  - Robot, Spider-based Indexing Engines
- Smart Parts/Capabilities Knowledge-based Search
  - Knowledge-based Parametric Search
  - Repository-centric Search Engines
  - Agent-based Multi-Repository Search Engines
- Knowledge Pedigree Representation
- Knowledge Access Control

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Thank You

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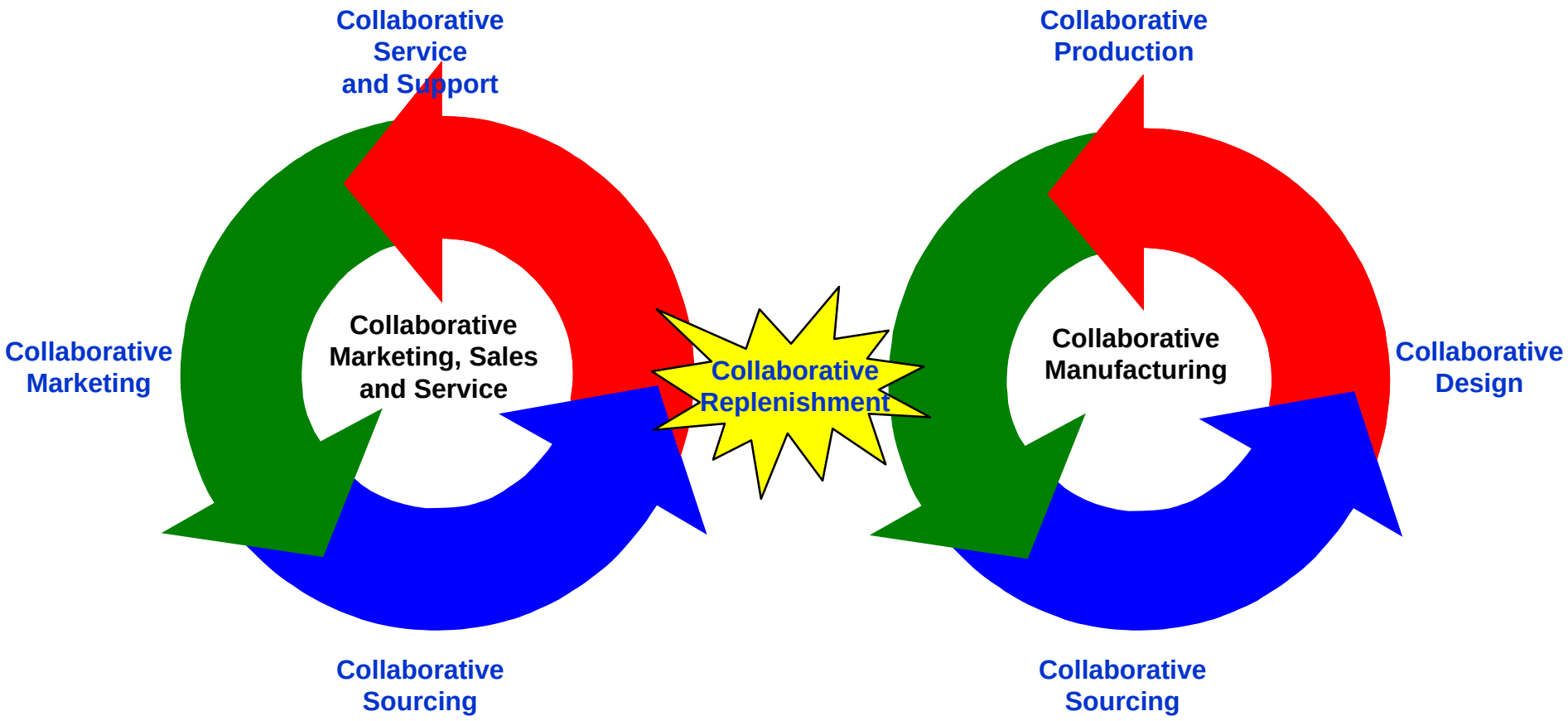
Collaborative Replenishment



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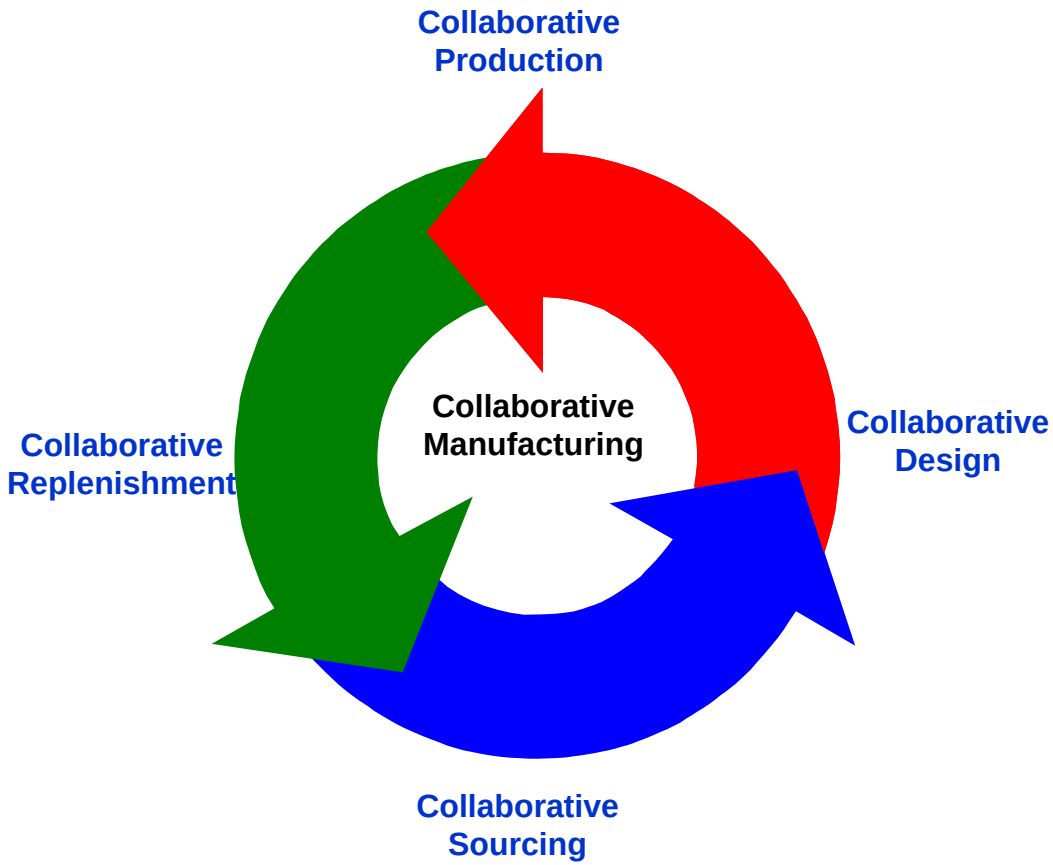
Collaborative Manufacturing



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