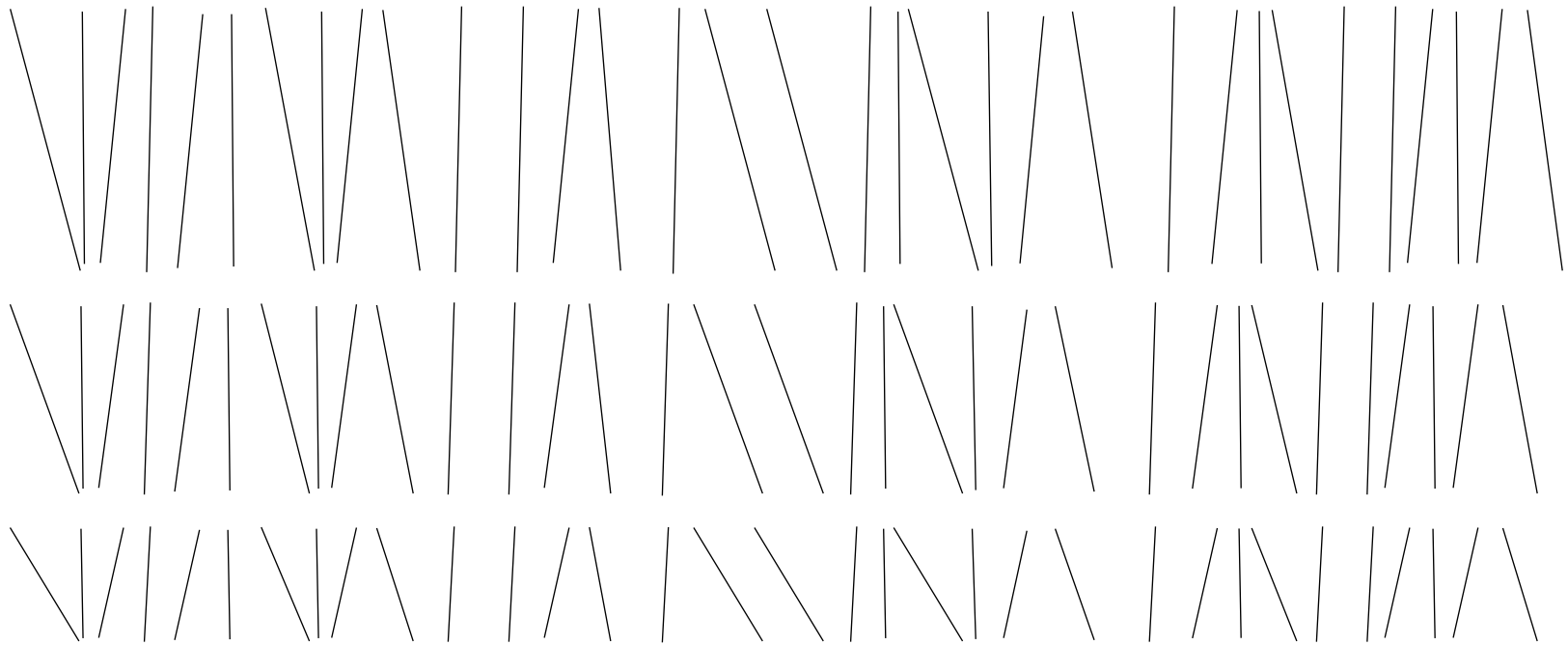




**emcien**

FROM ANALYTICS TO ACTION

# Solving product complexity with differentiated service levels



## Complexity: a product response to customer demand

Product features are continually changing, and so is customer demand for them. Manufacturers typically respond by offering greater variety in the products they sell. But as the number of configurations increases – and the complexity that goes with it – so does volatility in planning and execution.

Companies tend to oscillate between throwing complexity out by offering a short list of products or keeping it in and scrambling for profits. But all demand isn't created equal, and there are repercussions for treating it as homogeneous: too few configurations and customer needs aren't well met. Too many and forecasts miss the mark, inventory levels climb and costs multiply.

## A much better response

Complexity manifests as thousands, sometimes millions, of dynamic configurations – far beyond the capabilities of typical product management tools. Companies need an agile analytic tool to keep up with the multidimensional, continuously changing world of configurable products. Without it, they're doomed to repeat the same inefficient, unprofitable strategies that continue to lose money and lose customers.

EmcienMix™ is an analytics engine that continuously monitors customer buying patterns, reveals meaningful trends and provides actionable steps to master complexity across the enterprise.

All demand isn't created equal, and there are repercussions for treating it as homogeneous.

### How it works

EmcienMix divides the product complexity created by customer demand into manageable segments, each with its own efficient supply chain. Three service levels slice demand according to complexity, speed and profitability:

**Service level 1 = Full configurations** based on core demand.

**Service level 2 = Feature bundles and packages** based on how customers are already buying a product. This streamlines the ordering process while providing customers with more targeted choices. Parts requirements are planned with high forecast accuracy, leading to supplier stability and faster inventory turns.

**Service level 3 = Unique configurations** for specialist applications that require one-off parts or processes.

Service levels give manufacturers the flexibility to fully meet a diverse customer base while keeping a tight rein on costs.

### From product chaos to packages

- EmcienMix identifies strong buying patterns using customer data
- Patterns point to:
  - The best set of full configurations to offer (service level 1, explained below)
  - Packaging opportunities — features that are typically ordered together can be grouped into standard packages (service level 2)

Packages give manufacturers the predictability they need to improve forecasting, reduce costs and enhance customer satisfaction.

### Service levels and packages more effectively capture demand

**Service level 1:** fully configured packages (complete products)

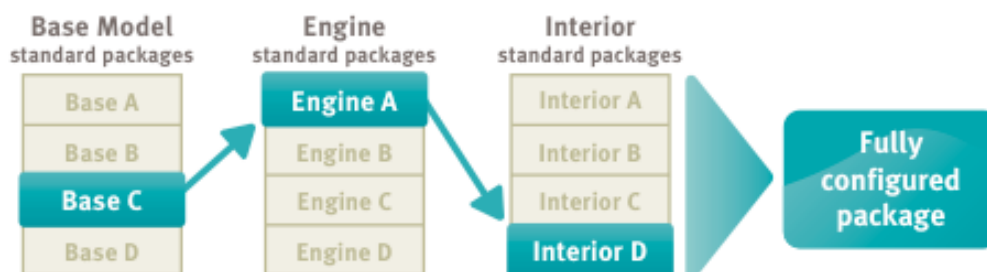
- Bestsellers — the most customers per configuration
- Quick delivery
- Predictable parts and lead time



Service level 1: customers choose among fully configured packages

**Service level 2:** standard packages (subgroups of features) combined into fully configured packages

- More customized than service level 1, less expensive than service level 3
- Definite delivery times
- Lean configuration mix aligned with the market
- Suppliers have reliable forecast of parts needed
- Fewer parts to manage



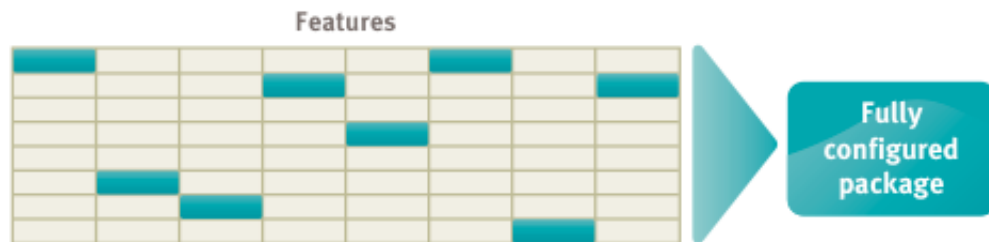
Service level 2: customers combine standard packages into fully configured packages

Packages give manufacturer the predictability they need to improve forecasting, reduce costs and enhance customer satisfaction.

Offering service level 3 ensures no customers are lost no matter how customized their needs are.

**Service level 3:** all features offered a la carte

- Most customized
- Longer but predictable lead times
- No parts or finished goods inventory
- No customer is turned away



Service level 3: customers combine a la carte features into fully configured packages

### Service levels let customers choose their product fate

- If they choose service level 1, they get their order fastest but without every bell and whistle.
- If they choose a service level 2 package, their order takes longer but is more customized than service level 1 and less expensive than service level 3.
- If they choose service level 3, their order takes considerably longer but is exactly what they want.

### Service levels enable manufacturers to shape demand

- Many customers will compromise on less important features, moving from a service level 3 to a service level 2 order, or from 2 to 1, to pay less or get delivery sooner.
- Manufacturers can proactively encourage this with targeted lead-time and price incentives.

#### No demand is lost

Service levels 1 and 2 typically cover 80% to 90% of demand, reducing service level 3 to a small fraction of total demand. Yet offering service level 3 ensures no customers are lost no matter how customized their needs are. And since service level 3 is build to order, inventory is pushed back to suppliers until it's needed.



## Results

Emcien saves companies from an all-or-nothing approach to managing product complexity: offering too little variety to remain competitive or offering too much and drowning in costs and configurations. EmcienMix creates a targeted product mix through service levels that align precisely with customer demand. This product agility is essential in a world where complexity and the costs associated with it are continuously on the rise.

**EmcienMix creates a targeted product mix through service levels that align precisely with customer demand.**

### For manufacturers

- Maximized margin per product line
- Lower order fulfillment costs
- Improved capital utilization through reduced inventory
- Reduced product complexity
- Improved operational efficiency
- Higher sales due to improved product availability
- Improved quality and higher manufacturing throughput

### For dealers

- Reduced inventory
- Reduced inventory carrying cost
- Faster turns due to stocking the right product choices
- Higher sales due to improved availability
- Reduced dealer-to-dealer trading
- Fewer customer incentives to move aging inventory

### For customers

- Better product availability
- Higher customer satisfaction
- More manageable choices
- Streamlined ordering process
- Improved product quality

### About Emcien, Inc.

Emcien is an Atlanta, GA-based software firm that solves complexity problems for discrete manufacturing companies. EmcienMix is a unique software solution that optimizes product mix to maximize profits, all while aligning closely with customer demand. Customers include Fortune 500 companies and manufacturers in the electronics, automotive and industrial sectors. Emcien was named a 2008 Cool Vendor in SCM and ERP by Gartner, Inc. To learn more, call 404-961-6360 or visit [www.emcien.com](http://www.emcien.com).