



---

# Manufacturing

Product Management Cost Reduction  
Case Studies



---

# Cost Saving Approaches

There are many ways to lower costs and increase time to market through thoughtful product management strategies combined with partnering with industry experts. Often cost reduction can go hand-in-hand with product improvements, lightweighting or other product benefits.

Here are four case studies of innovative approaches to solving these challenges.



# Profitability Improvement for NA Based Heavy Engineering Product Manufacturer

## Business Challenge

Client is a NA based heavy engineering product manufacturer who was struggling to maintain product profitability due to multiple challenges. One challenge was the cost of parts due to an increase in material prices, logistics and tariff changes on China imports. This was affecting their ability to be competitive in the market and introduce new differentiated features. While the client had their own sourcing team, they wanted to engage a third party who could look at the situation holistically and suggest alternate solutions to help improve profitability.

### Approach

- Infinite team studied the current Bill of Material (BoM) with current supplier/pricing information
- Infinite team performed should costing for parts to understand the various factors contributing to the overall cost
- Once a broad understanding was achieved, Infinite launched a formal RFP process with target suppliers for different commodities



### Solution

- Infinite performed a pricing simulation for various geographies and reached out to key suppliers, out of **pool of 500+ suppliers** who could provide desired cost reduction
- Wherever build to spec was resulting in difficulties, **proposed alternate materials/manufacturing processes** without affecting performance
- Final analysis of all quotes with logistic costs was done to arrive at **optimal strategy** which could provide desired benefits



### Business Value

- Infinite's solution resulted in a **20% product cost reduction** increasing product profitability
- While we started with one product, these suppliers are being evaluated for multiple other parts utilizing the same commodity, resulting in additional cost reduction.



# Product Development for Off-Highway Equipment Manufacturer

## Business Challenge

The client is a leading US-based manufacturer of Off-Highway equipment. With a large installed base, their growth strategy included re-connecting with their existing clients for after-market sales as well as entering new markets. They were seeking a partner to provide end-to-end product development services to support, maintain and retrofit existing equipment and design cutting edge new equipment.

### Approach

- Infinite implemented a unified platform approach across all products.
- Innovative design incorporated next-gen approaches such as utilizing lightweight materials, implementing core telematics, deploying fleet management technology, and data capture and analysis for preventative maintenance.



### Solution

- The solution included complete product design including
  - Strategy and benchmarking
  - Mechanical & industrial design
  - Prototyping & testing
  - Retrofit options w/ lightweighting
  - Finalizing specs & suppliers
  - Software systems & testing
  - Release



### Business Value

- Light weighting reduced the bill-of-material cost **by 30%**.
- **Reduce time-to-market by 35%**.
- Ensured compliance for driver safety and asset audits.



# Experiential Testing for Infotainment Systems for Automobile Manufacturer

## Business Challenge

One of the world's largest automotive manufacturing corporations wanted to **deliver a superior digital experience** for their consumers. They sought an innovative solution to measure, monitor and manage the user experience from the **In-Vehicle Infotainment (IVI)** to deliver a **mobile-like experience**. Engineering teams wanted to differentiate their product by ensuring that all bundled IVI apps give consistent UX across new releases and upgrades. They also wanted to benchmark their platform with industry competitors and peers. The key business driver was **customer delight** through continuous monitoring of IVI units' UX.

### Approach

- Infinite's team proposed use of their **Experiential Testing Platform (ETP)** for complete **DNA** (Device, Network, Application) analysis of the IVI platform
- Infinite recommended a PoC-driven approach with a selected **Vehicle Model/IVI unit** model, which was later expandable to more such combinations



### Solution

- Infinite performance testing experts deployed the ETP solution **on in-garage vehicles** (AOSP/SDK) and conducted thorough **performance** testing with **150+ KPIs**
- The solution generated **AI based insights** to **simplify defect triaging** of infotainment experience issues.
- Comprehensive test analysis and reports with release-by-release benchmarking were provided for **engineering and product management teams**



### Business Value

- Infinite's innovative solution resulted in **60% fewer hours** spent on QA for new releases.
- Solution also resulted in **80% reduction** in production issues.



# Product Takeover for SaaS-Based Enterprise Insights, Visualization and Workflow Management Solution

## Business Challenge

The client is a leading US-based software and services provider for process industries. With a large installed base, their growth strategy was to increase their product portfolio through investments and innovate with digital tech. They were seeking a partner to completely own and operate one of their legacy enterprise platforms with Extension-Of-Life in 2 years.

### Approach

- Infinite devised a product takeover strategy backed by a complete Return on Investment (ROI) plan.
- Shared the value of EOL (Extension of Life) through a committed, consistent strategy for product innovations.



### Solution

- Infinite demonstrated its strong digital engineering credentials & was selected as a preferred partner to completely transfer and manage the complete product lifecycle.
- Demonstrated agility and business acumen to rapidly transition & deliver cost and time saving through a right-shoring model
- Complete product ownership & agile execution
- Product DevOps transition (Azure) – 4 Weeks
- Complete AWS Product Infra / Hosting transition



### Business Value

- **Reduced TCO by 35%**
- Extended product life from 2 to 5 years
- Full product knowledge transition in 16 weeks



# Reduce Time to Validate 50K Test Automation for a Large Telecom OEM

## Business Challenge

Despite the automation of 50K test cases for one of the optical switch products, the customer was not able to release the product to production before 3 weeks. This delay was due to the time taken for manual verification of **2GB worth** of Test Case / Application Logs / System Logs, Database, and Protocol logs. **Time to market was critical and they needed an accelerated timeline.**

### Approach

- Infinite's team proposed use of **AIOps technology** to reduce the test result validation effort
- Our data science experts and test SMEs collaborated to develop an intelligence module that will predict the pass/fail of test runs based on.



### Solution

- Infinite's AIOps solution based on Azure Machine Learning developed AI model using past test results/system logs/database/protocol logs
- The trained-tested model was integrated with the existing automation module in the CI/CD pipeline and the test result is generated immediately after the automation run.
- **Only** those test cases that passed/failed with **low percentage accuracy are manually verified**



### Business Value

- Infinite's AIOps solution was able to reduce QA release time from **weeks to days**
- With continuous training the percentage **accuracy increased 15%-20%** in 6 months

		Predicted	
		Positive	Negative
Ground-Truth	Positive	True Positive	False Negative
	Negative	False Positive	True Negative



# Four Approaches to Improving Manufacturing Cost



## Sourcing Assessment

Bill of material assessment and should costing to reassess product material sourcing to lower product cost utilizing a proven, stable supplier network.



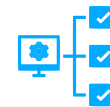
## Unified platform approach

Utilized next gen approaches, such as lightweighting, to achieve cost reduction.



## Product Consolidation

Transition product line utilizing latest development techniques such as DevOps to improve TTM and lower product cost.



## Experiential and Automated AI based Testing

Utilizing POC approach and AI Ops. Machine learning and CD/CI to dramatically improve time to market and reduce production defects.



---

**Let's continue  
the discussion**  
[partners@infinite.com](mailto:partners@infinite.com)

