

LAB SCENARIO

**Building Serverless Solutions
with Azure and .NET**

The Cool Revive Journey

From Frosty Beginnings to Innovation



Founding Story

- Evalyn Frost and Victor Glacier
- Shared dream: revolutionize world of refrigerator
- Believed every appliance deserves second chance
- Founded during the frosty winter of 2005
- Mission: reduce waste, conserve resources, create sustainable solutions

Early Challenges

- Prototype: ice-blue retro fridge
- Worked into late into the night, soldering wires, recalibrating thermostats, and whispering encouragement to the stubborn compressor
- Knew they were onto something





The Breakthrough

- Innovative approach caught attention of local repair shops, environmentalists, and Percy
- ChillCycle algorithm optimizes cooling efficiency while minimizing energy consumption

Manifesto

- Refrigerators Deserve Resurrection
- Eco-Friendly Overhaul
- Art Meets Appliance
- Community Cool-Offs



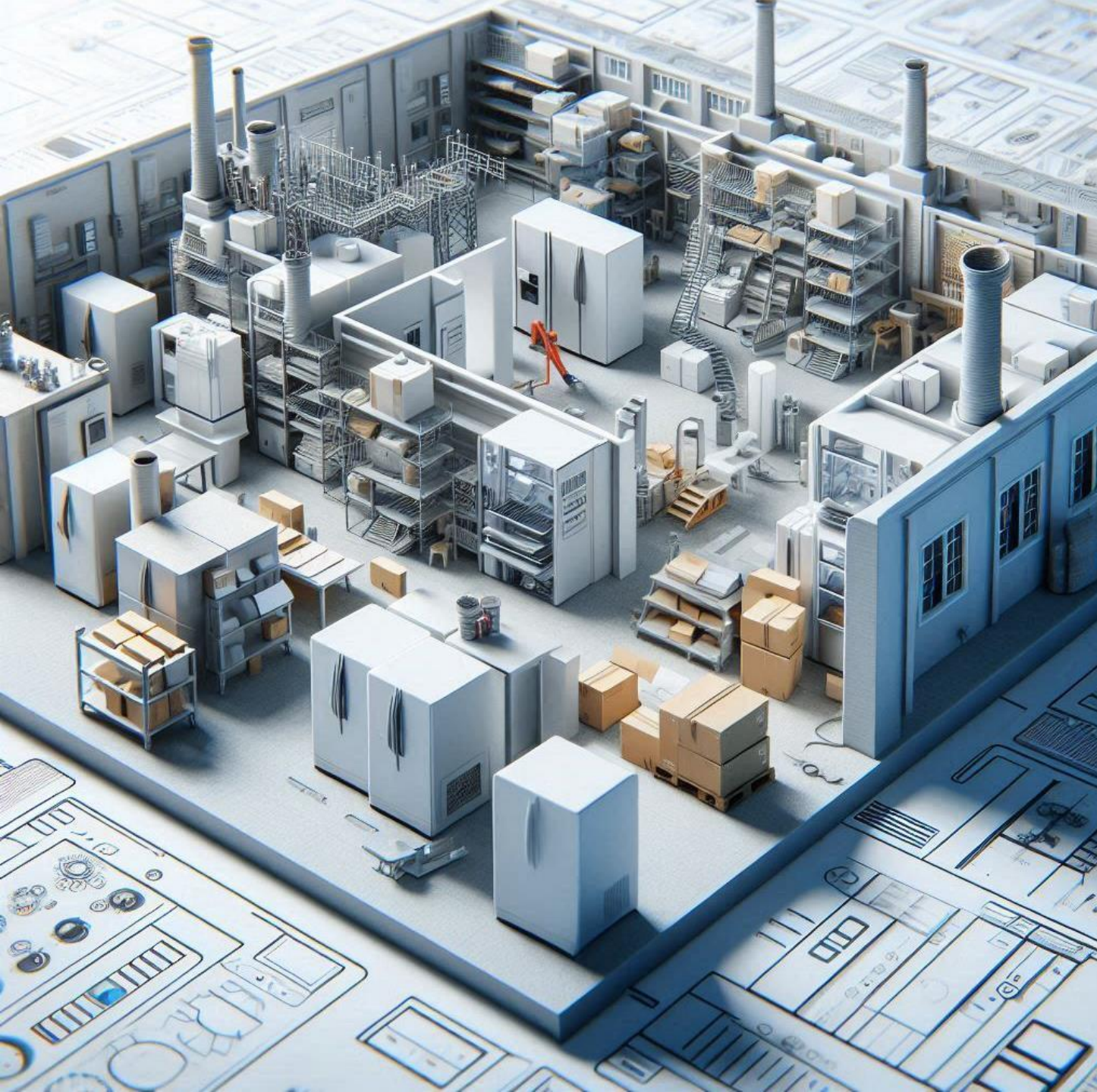
The Cool Revive Legacy



- Stands tall, emphasized by its logo, the phoenix
- Refrigerators grace trendy cafes, cozy cabins, and eco-conscious homes
- Frosty tale of resilience, reinvention, and art of keep things cool

Business Scenario

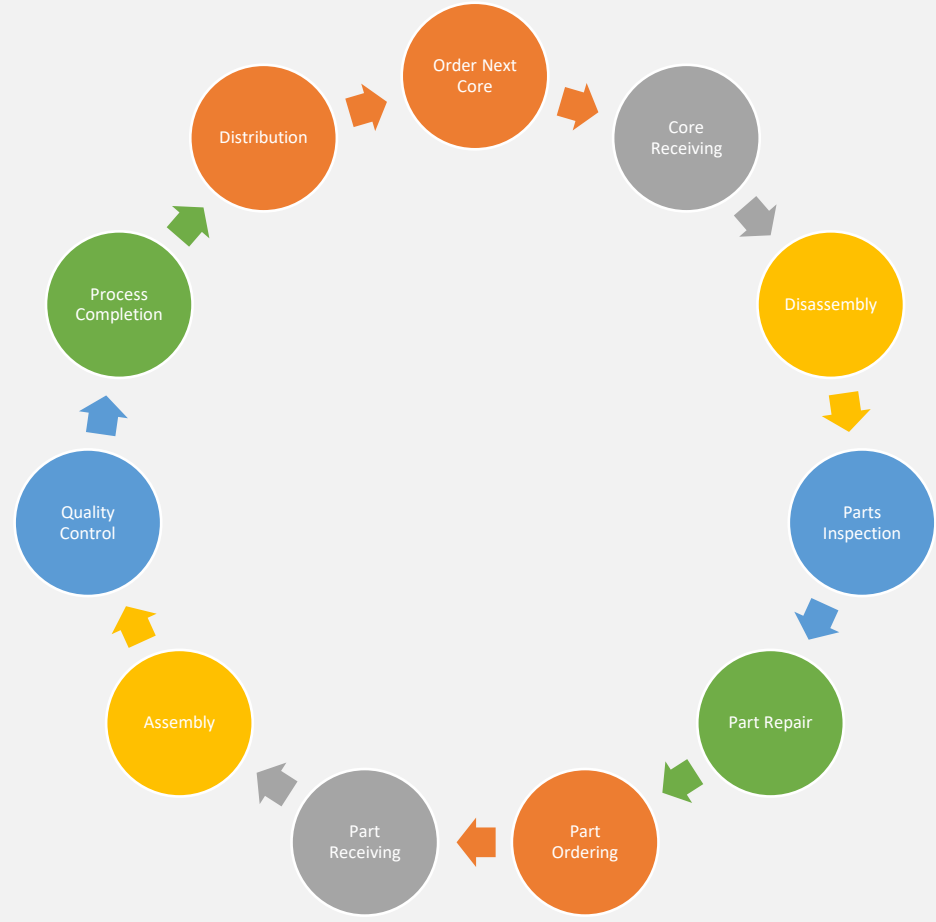
Refrigerator Remanufacturing



Business Scenario

- Relies on paper-based solutions to manage remanufacturing process
- Need better, more automated process
- Improve company's efficiency

The Remanufacturing Process



Cool Revive's Mission and Values

**Environmental
Responsibility**

**Innovation and
Aesthetics**

**Community
Engagement**

Additional Considerations



- Exemplifies how technology, sustainability, and creativity intersect
- Saves energy and tells a frosty tale of resilience and reinvention
- “Keep it cool, but always stay warm-hearted.”
- Automated process will benefit environment

Statement of Work

Automated Remanufacturing Process

Objectives

Optimize Workflow

- Streamline processes to minimize lead time and resource utilization.
- Enable parallel execution of tasks where possible.

Objectives

Optimize Workflow

Scalability and
Flexibility

- Design an architecture that accommodates varying production volumes.
- Support future expansion and additional features.

Objectives

Optimize Workflow

Scalability and
Flexibility

**Event-Driven
Communication**

- Implement event-based communication between services.
- Ensure timely updates and coordination.

Business Requirements

Efficient Remanufacturing Workflow

- Cool Revive aims to streamline the remanufacturing process for refrigerators.
- The solution should optimize the flow from core unit arrival to quality control completion.
- Efficiency means faster turnaround time and reduced resource wastage.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

- Cool Revive needs real-time visibility into inventory.
- The solution must track part conditions, repair statuses, and assembly progress.
- Accurate inventory data ensures smooth operations.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

Scalability and Agility

- As Cool Revive expands, the solution should scale seamlessly.
- Whether handling ten or a thousands of core units, the system should adapt dynamically.
- Agility allows Cool Revive to respond to market demands swiftly.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

Scalability and Agility

Cost Optimization

- Cool Revive wants to minimize infrastructure costs.
- Solutions should avoid overprovisioning.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

Scalability and Agility

Cost Optimization

Event-Driven Communication

- Events trigger various steps in the remanufacturing process.
- The solution must handle event-driven communication between services.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

Scalability and Agility

Cost Optimization

Event-Driven Communication

Security and Compliance

- Protecting customer data and complying with regulations are paramount.
- The solution should incorporate robust security practices.
- Encryption, access control, and threat detection are essential.

Business Requirements

Efficient Remanufacturing Workflow

Inventory Management and Tracking

Scalability and Agility

Cost Optimization

Event-Driven Communication

Security and Compliance

Global Reach

- Cool Revive operates internationally.
- The solution should support the global distribution of inventory data.

Business Requirements

Efficient Remanufacturing Workflow

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Scalability and Agility

Cost Optimization

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Global Reach

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Business Requirements

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Global Reach

Key Performance Indicators (KPIs)

Scalability and Flexibility

- **Auto-scaling efficiency:** How quickly the system adapts to workload changes.
- **Resource utilization:** Ensuring optimal use of resources without overprovisioning.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

- **Service response time:** How quickly the services react to events.
- **Execution duration:** Time taken to complete a service action.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

Inventory Visibility and Accuracy

- **Inventory update frequency:** How often data reflects changes
- **Data consistency:** Ensuring accurate and synchronized inventory across locations.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

Inventory Visibility and Accuracy

Cost Efficiency

- **Compute cost per transaction:** Calculating cost based on usage.
- **Infrastructure savings:** Comparing costs to traditional infrastructure.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

Inventory Visibility and Accuracy

Cost Efficiency

Security and Compliance

- **Security incidents:** Monitoring any breaches or vulnerabilities.
- **Compliance adherence:** Meeting industry standards and regulations.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

Inventory Visibility and Accuracy

Cost Efficiency

Security and Compliance

Event-Driven Communication

- **Event delivery reliability:** Ensuring event trigger services consistently.
- **Latency:** Time taken for events to propagate.

Key Performance Indicators (KPIs)

Scalability and Flexibility

Response Time and Execution Duration

Inventory Visibility and Accuracy

Cost Efficiency

Security and Compliance

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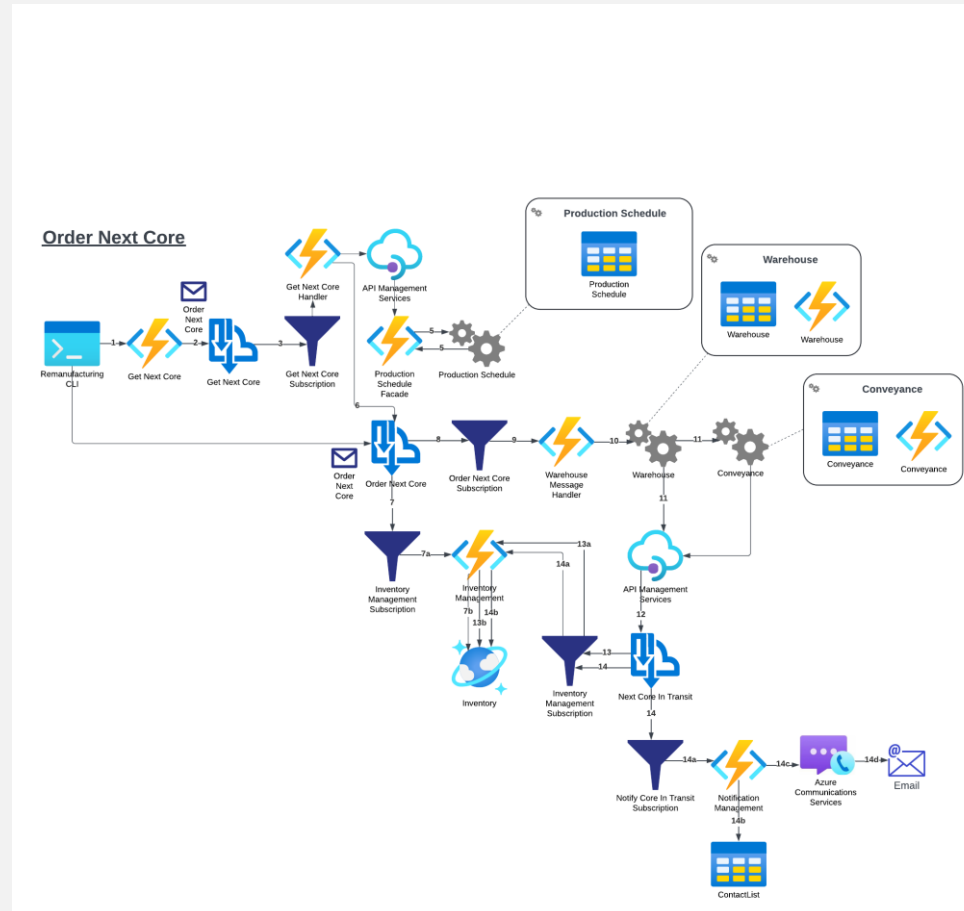
Cost Efficiency

Security and Compliance

Event-Driven Communication

Solution Overview

Order Next Core





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