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#### Methods to achieve architectural realignment in **Product Portfolio Rationalization**









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#### Sr. Solutions Architect

Business oriented Technologist. Working in Presales. Loves designing solution blueprints and application architectures.







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#### **Technical Architect**

Leads platform development and drives the design and architecture of product engineering and re-engineering software solutions.



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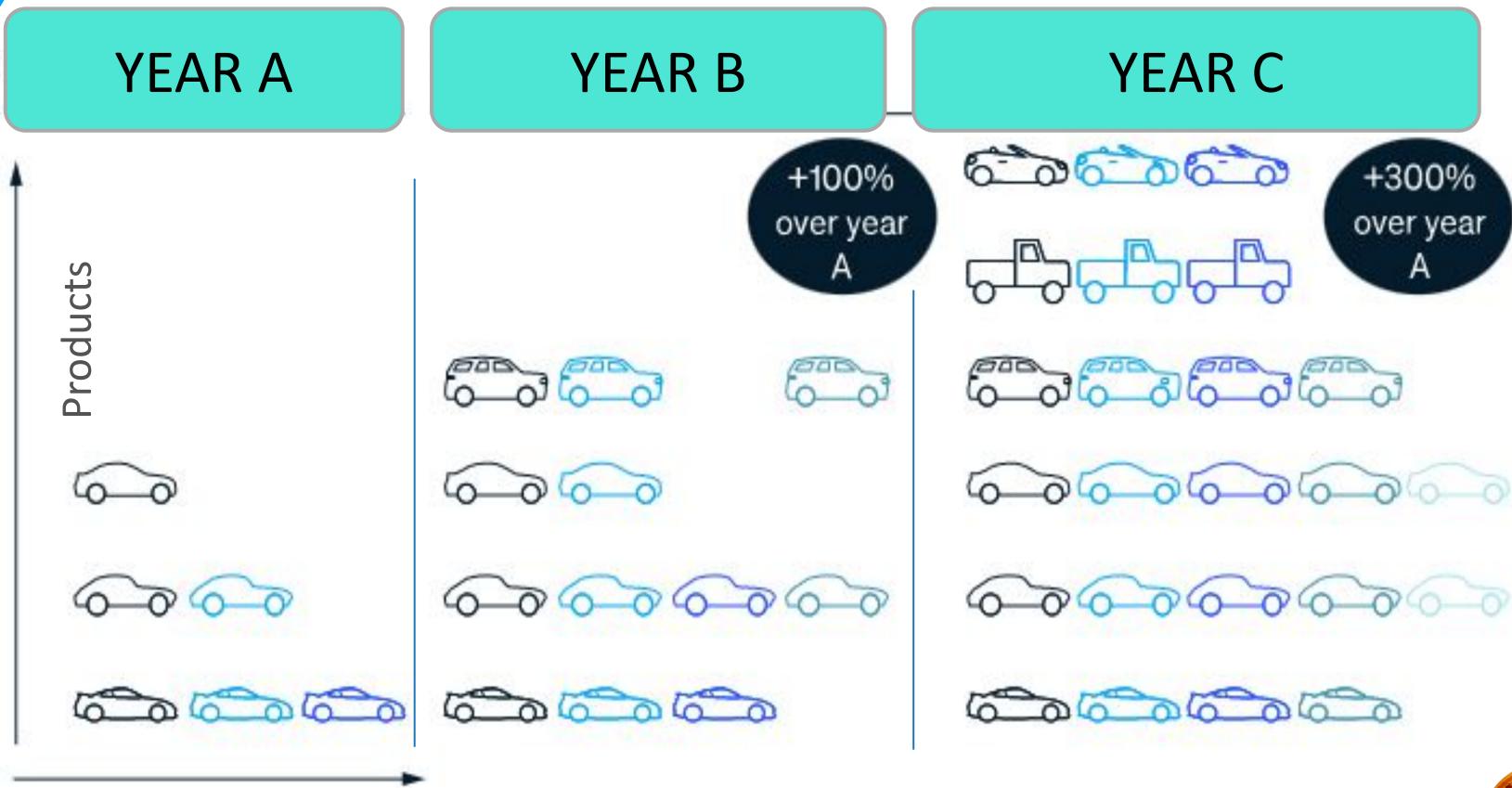


#### Background



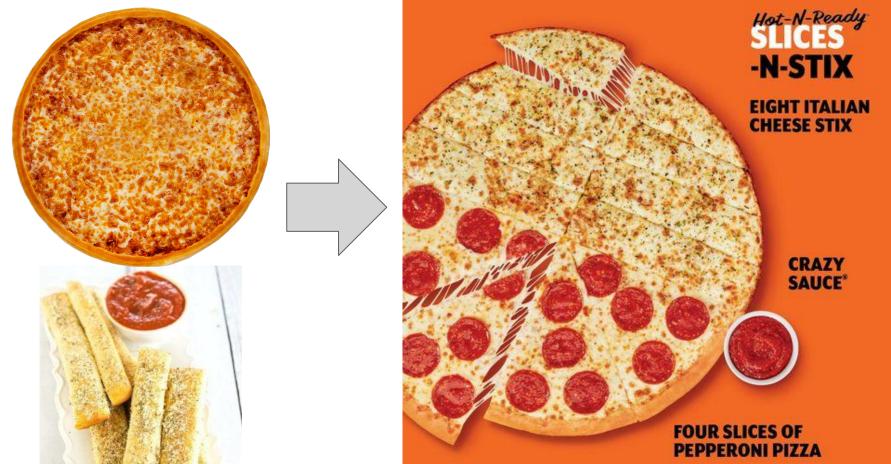


#### **Product Portfolio Management**



Time

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#### **Product Portfolio Management**

#### **Apple Inc's Products**

| iPhones       | iPads     | Macintosh          | Apple<br>Watch          | TV          | Music       |
|---------------|-----------|--------------------|-------------------------|-------------|-------------|
| iPhone 11 Pro | iPad Pro  | MacBook Pro<br>13" | Apple Watch<br>Series 5 | Apple TV+   | Apple Music |
| iPhone 11     | iPad Air  | MacBook Pro<br>16" | Apple Watch<br>Studio   | Apple TV pp | AirPods Pro |
| iPhone SE     | iPad      | MacBook Air        | Apple Watch<br>Nike     | Apple TV 4K | AirPods     |
| iPhone Xr     | iPad mini | Mac mini           | Apple Watch<br>Hermes   | Apple TV HD | HomePod     |
|               |           | iMac               | Apple Watch<br>Edition  | AirPlay     | iPod touch  |
|               |           | iMac Pro           | Apple Watch<br>Series 3 |             | Beats       |

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#### **Product Portfolio - Background**

- Product Portfolio Management originated in the context of physical products & their manufacturers.
- However, it is also very relevant to software products now.

What are the **motivations** that lead to creation of a **Product Portfolio?** 

- **A.** To diversify product offerings
- **B.** Segment across different geographies / demographics etc.
- **C.** Create additional revenue streams using existing offerings / resources
- **D.** Adjunct products for innovation

**Methodologies** to create a product portfolio?

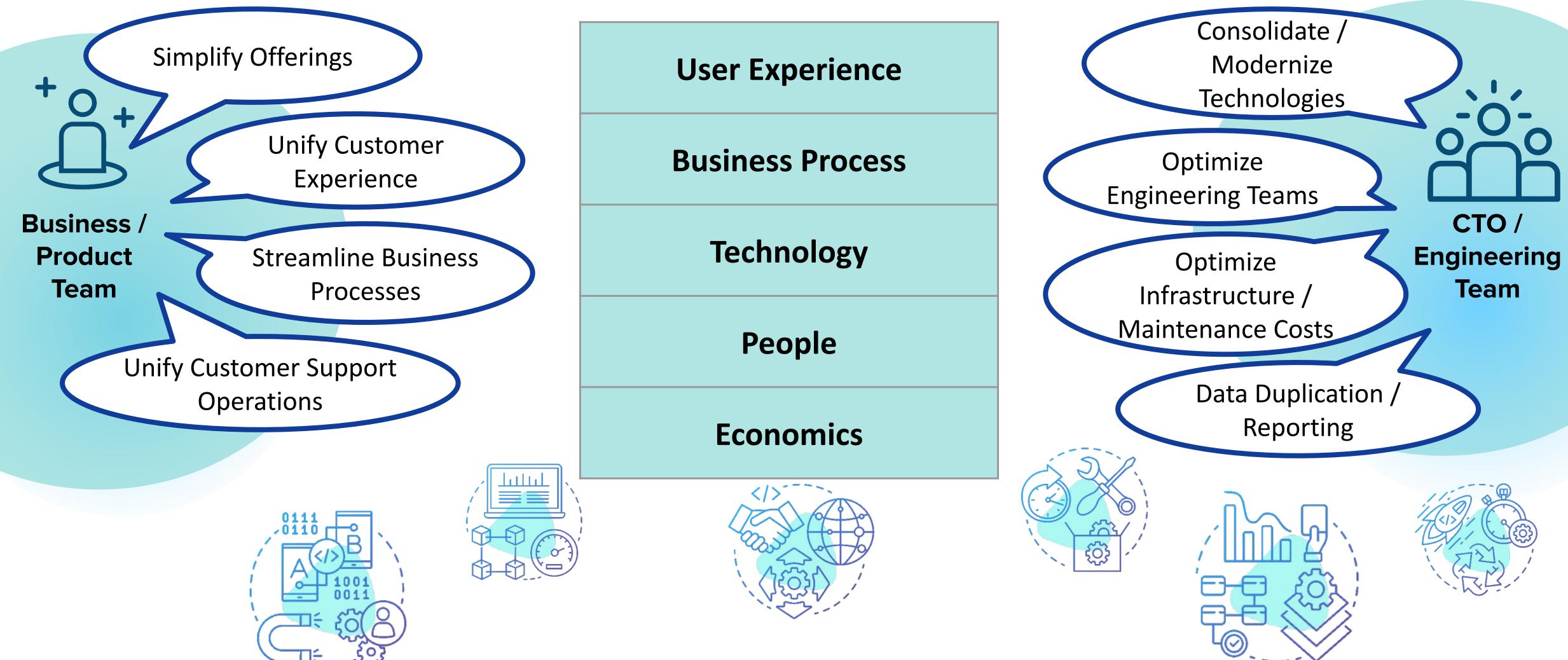
- **A. Inorganic Evolution -** Mergers and Acquisitions
- **B. Organic Evolution -** Self Developed Solutions







#### **Business & Technology Objectives**



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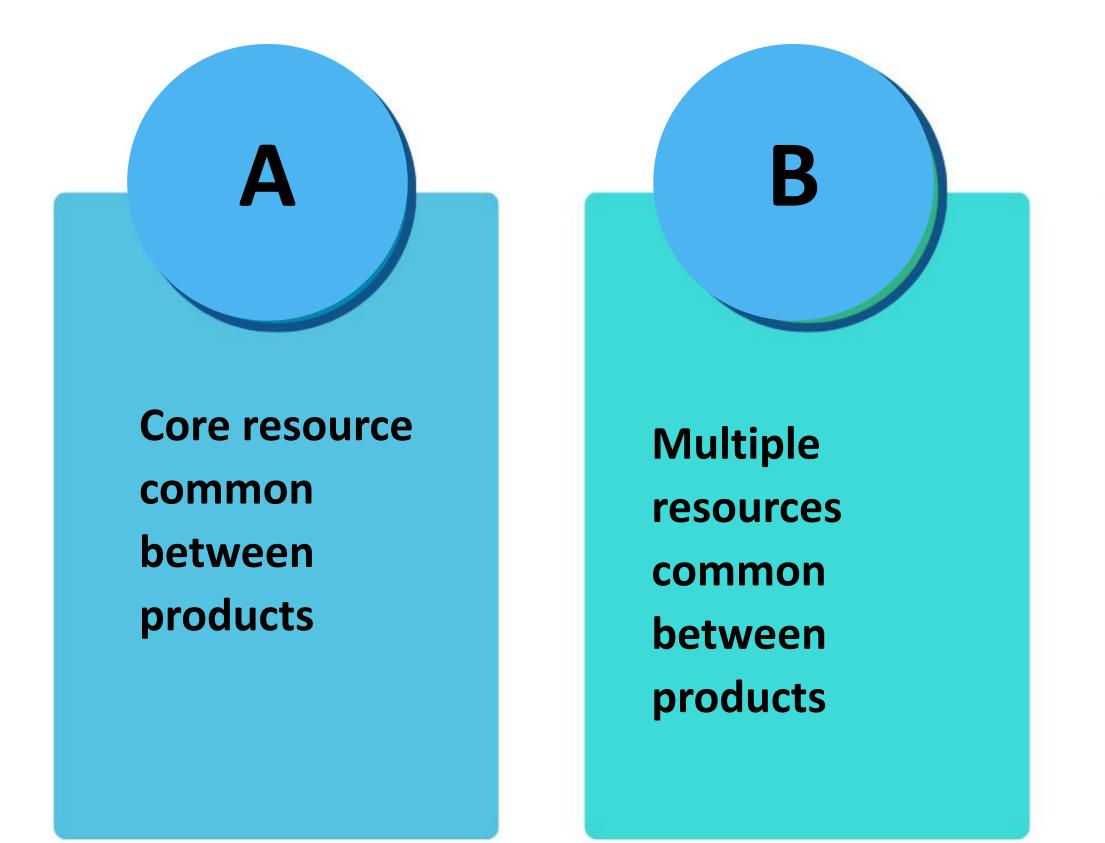
# Product Portfolio Analysis





#### **Structural Patterns in Product Portfolio**

How are **Products Structured**?





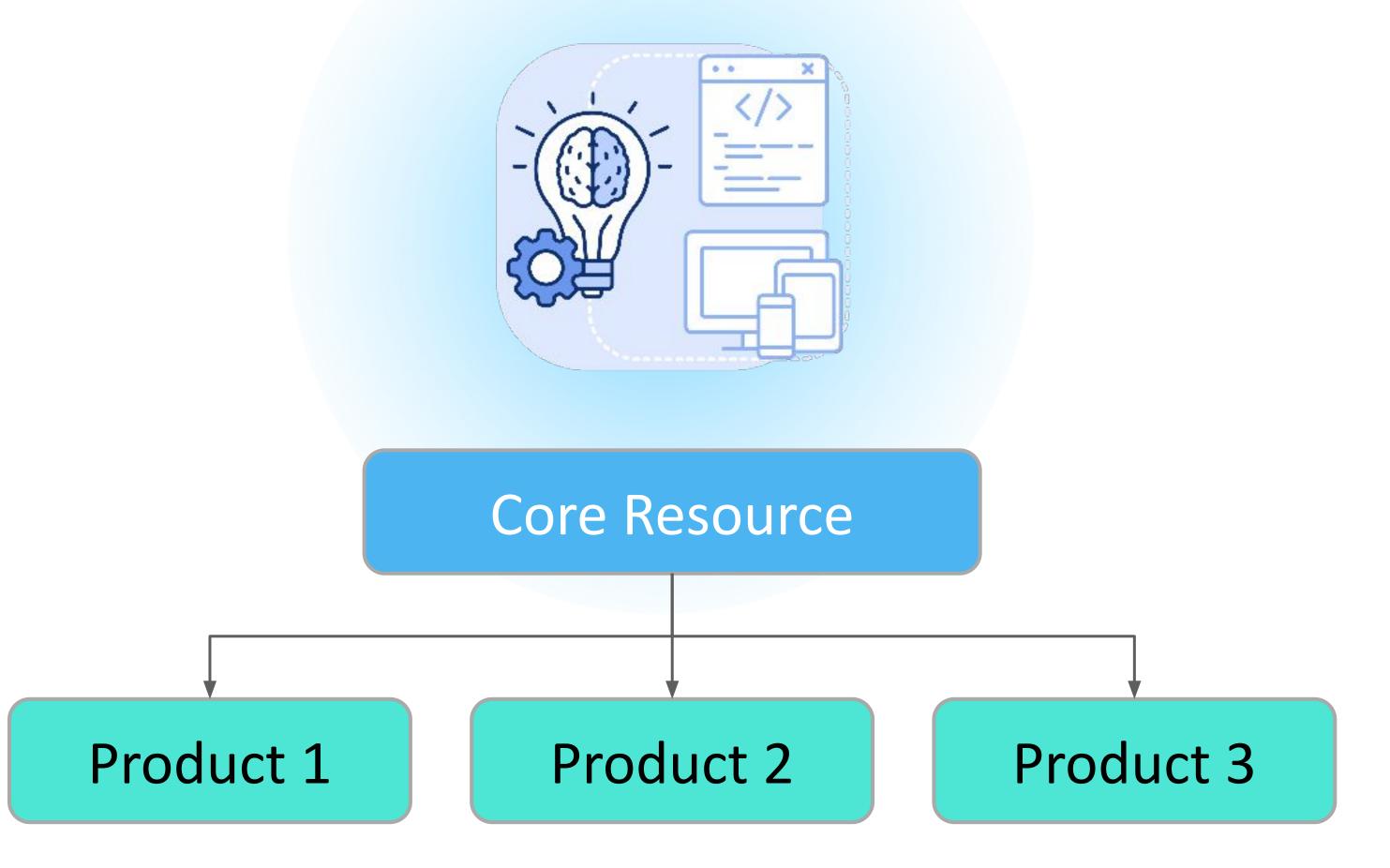


**Synchronization** between resources





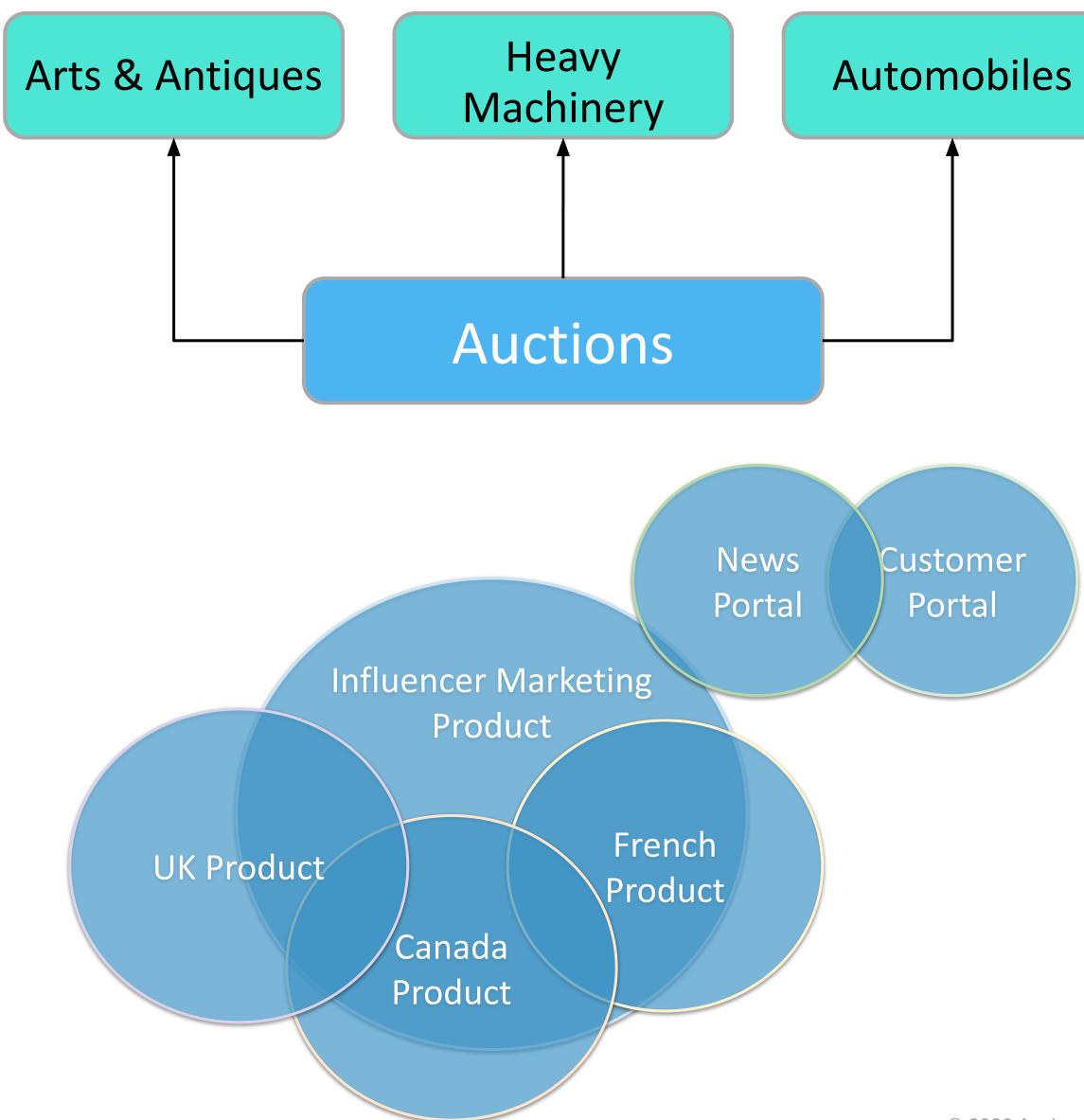
#### **A. Core Resource Common Between Products**







#### **Core Resource Common Between Products - Examples**





#### **Auction Platform**

**Motivation:** Diversify **Methodology:** Mergers & Acquisitions

**Influencer Marketing** 

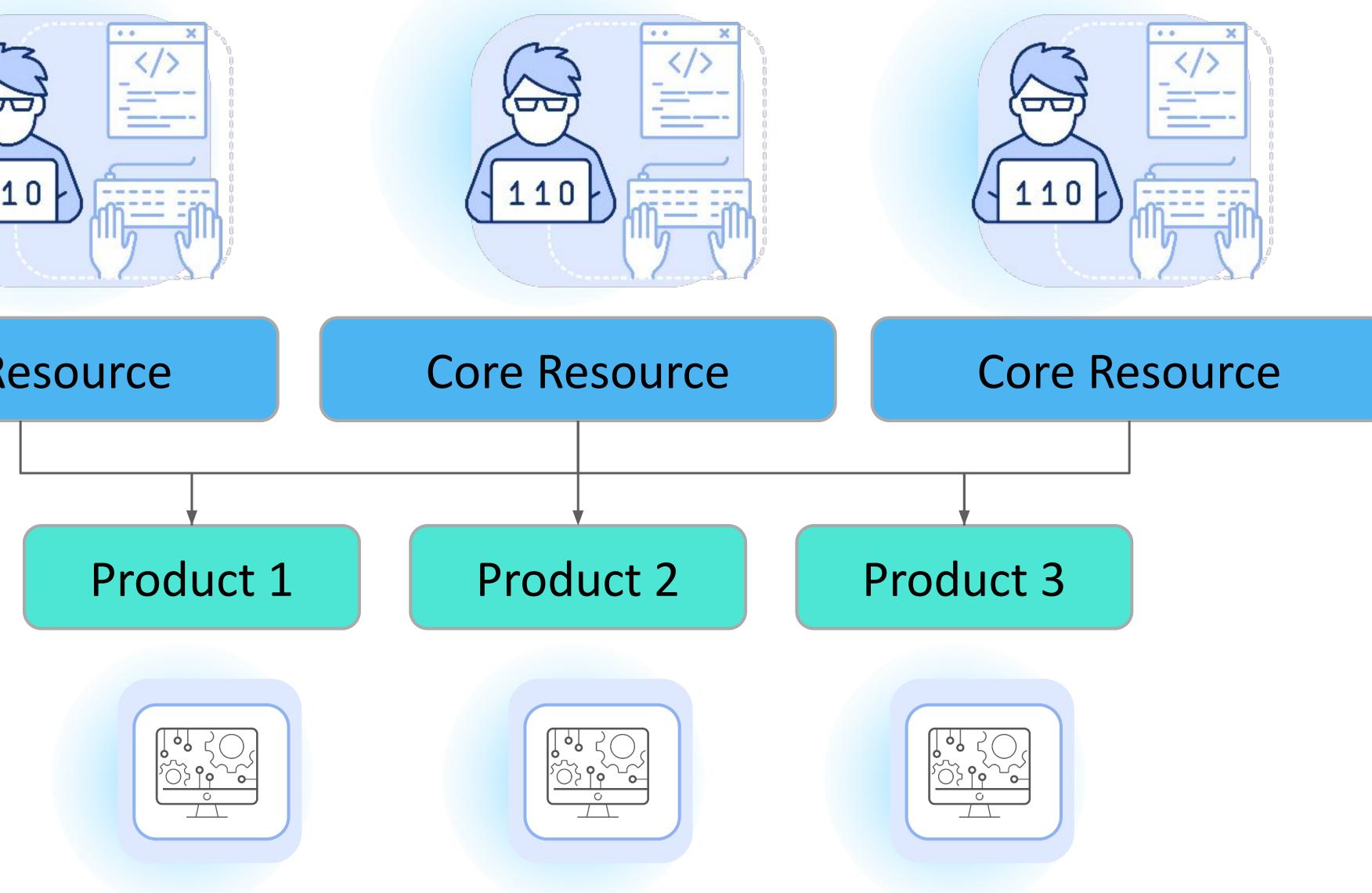
**Motivation:** Segments **Methodology:** Mergers & Acquisitions



#### **B. Multiple Resources Common Between Products**



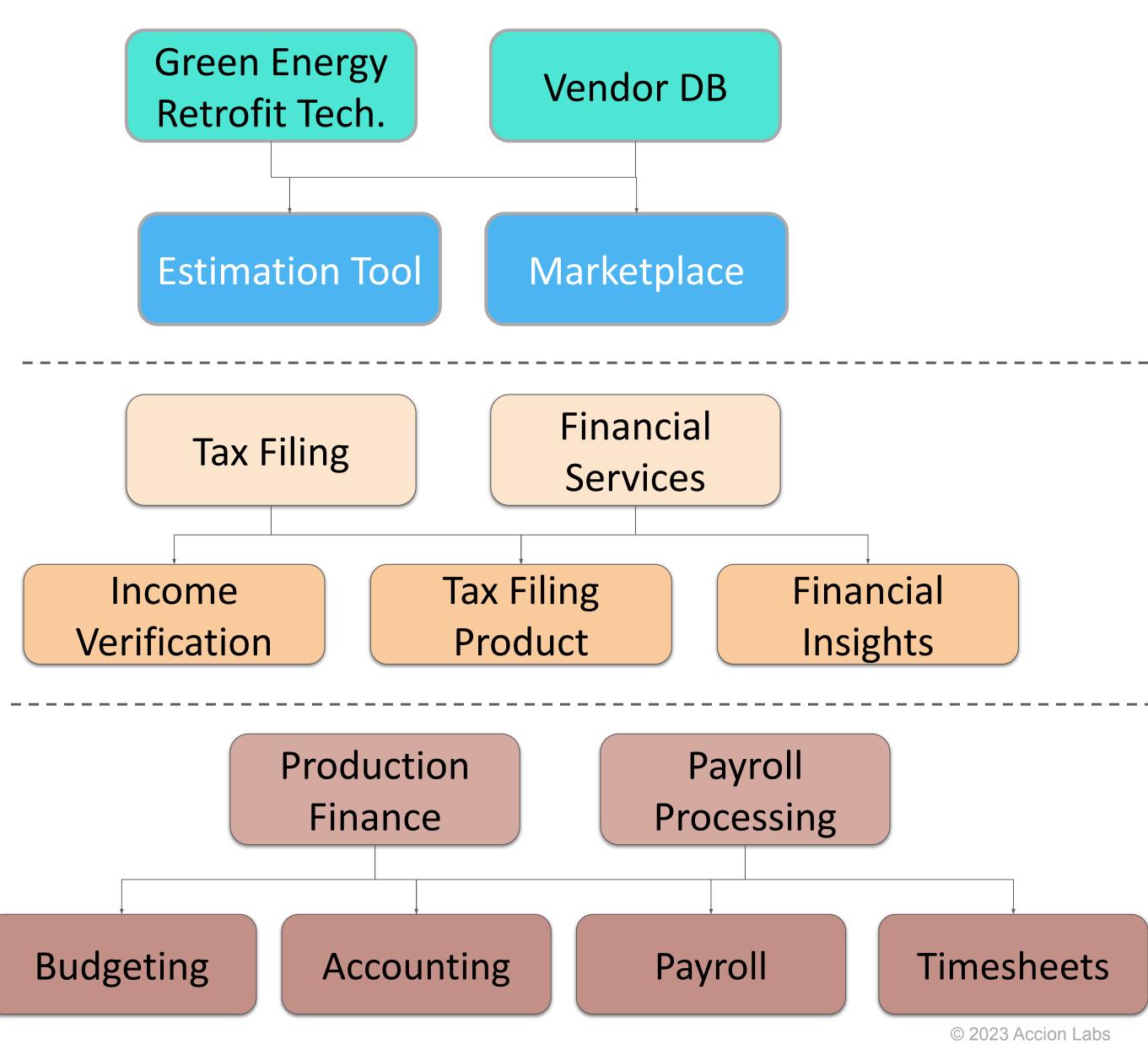
#### **Core Resource**







#### **Multiple Resources Common Between Products - Examples**





**Energy Efficient Retrofit Estimation** Product

**Motivation:** Adjunct Innovation Methodology: Self Developed

**Financial Insights & Tax Filing Services** 

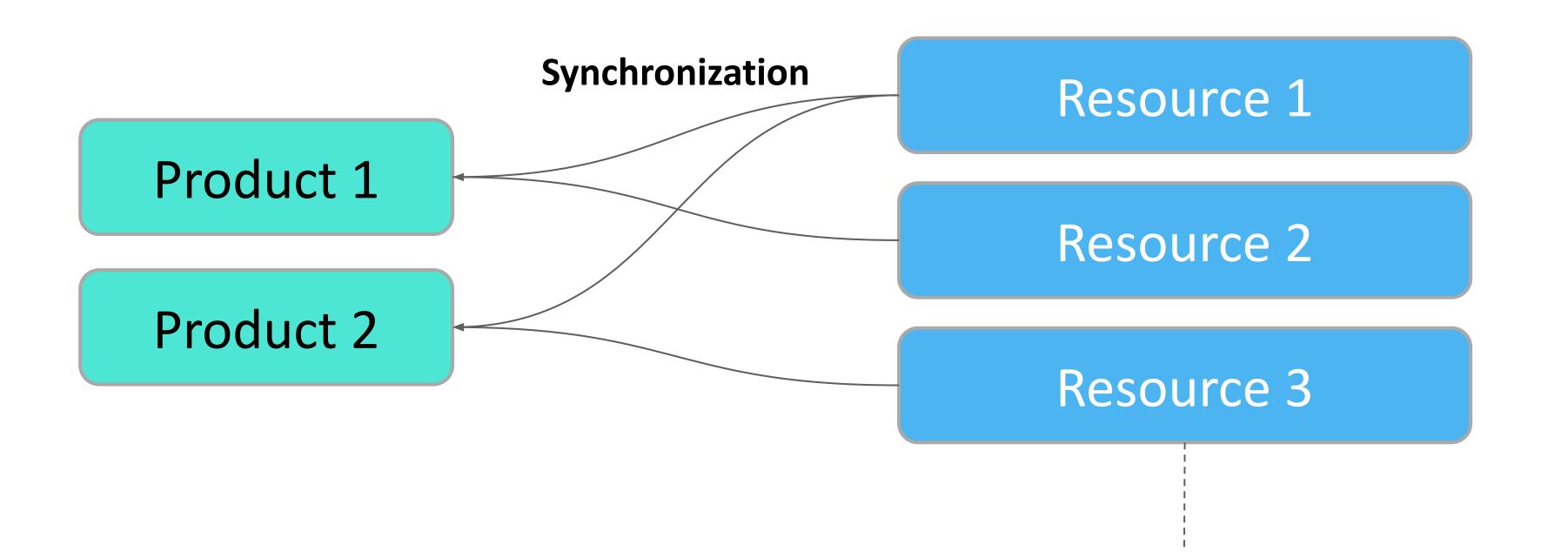
**Motivation:** Additional Revenue Streams Methodology: Self Developed

**Payroll & Accounting Products for Entertainment Industry** 

**Motivation:** Diversify **Methodology:** Mergers & Acquisitions



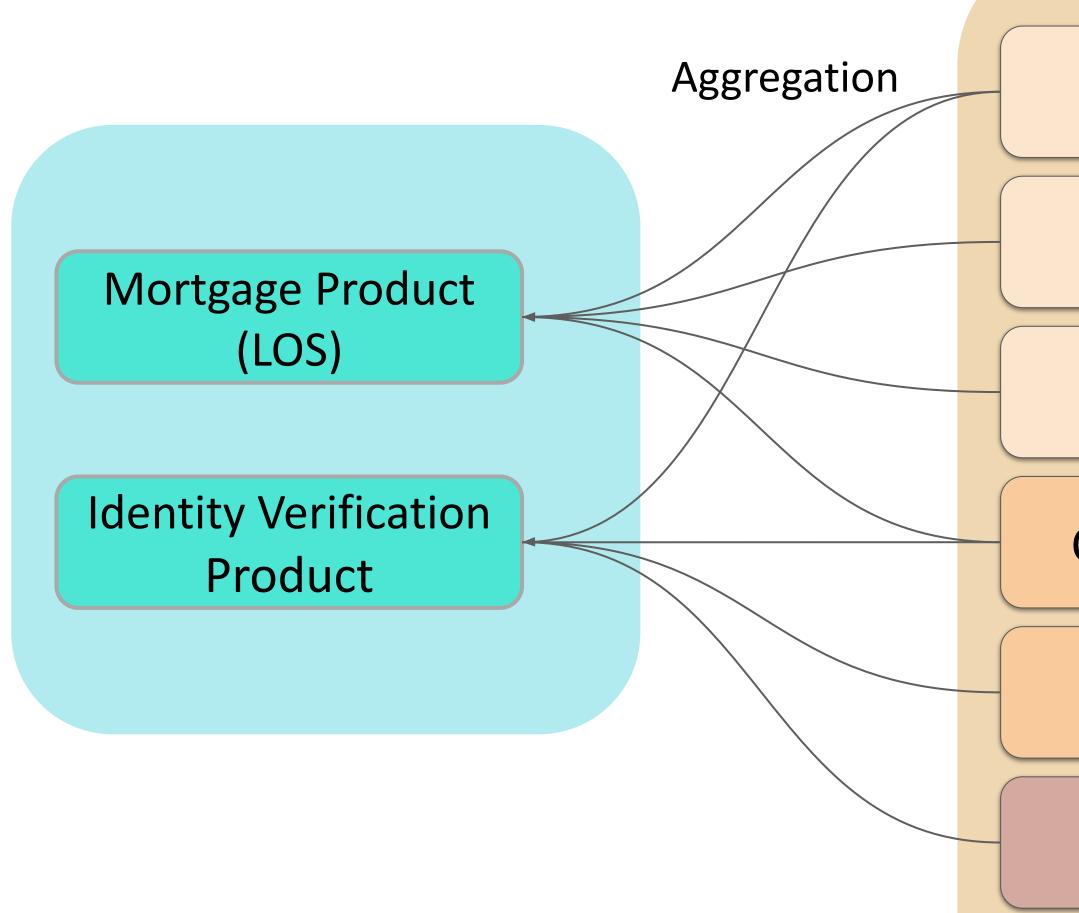
#### **C. Synchronization Between Resources**







#### **Synchronization Between Resources - Example**



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#### **Data Sources**

**Credit Bureau 1** 

Credit Bureau 2

**Credit Bureau 3** 

**Criminal Check Provider** 

**Address Verification** Provider

**Employment Verification** Provider

#### **Credit Aggregator**

**Motivation:** Additional Revenue Streams & Adjunct Innovation Methodology: Self Developed



#### **Key Pain Points Summarized**

#### Category

I can't run an international influencer marketing that spans multiple geographies from a single pe

I have a vintage tractor that I need to auction, be manage and run the auction on multiple website

As a Product Manager, everytime I have to mod have to modify it in all the products.

Our Infrastructure costs are too high considering applications that we have to host.

Everytime I switch from one product to another login again.

Everytime we find a new data source to integrat products, all of our products have to undergo ch integration.

|                                 |                             | Acciona             |
|---------------------------------|-----------------------------|---------------------|
|                                 | Area                        | Root Cau            |
| g campaign<br>oortal.           | Psychological<br>Complexity |                     |
| out have to<br>tes.             | Substance Complexity        | Functior<br>Overla  |
| dify a feature, I               | <b>Dynamic Complexity</b>   |                     |
| ng all the                      | Substance Complexity        |                     |
| r I have to                     | Psychological complexity    | Architect<br>Overla |
| ate into our<br>hanges for that | Dynamic Complexity          |                     |







# Methods of Rationalization





#### **Rationalization Tenets**

### **Functional Overlap**

Consolidate

Migrate

Sunset

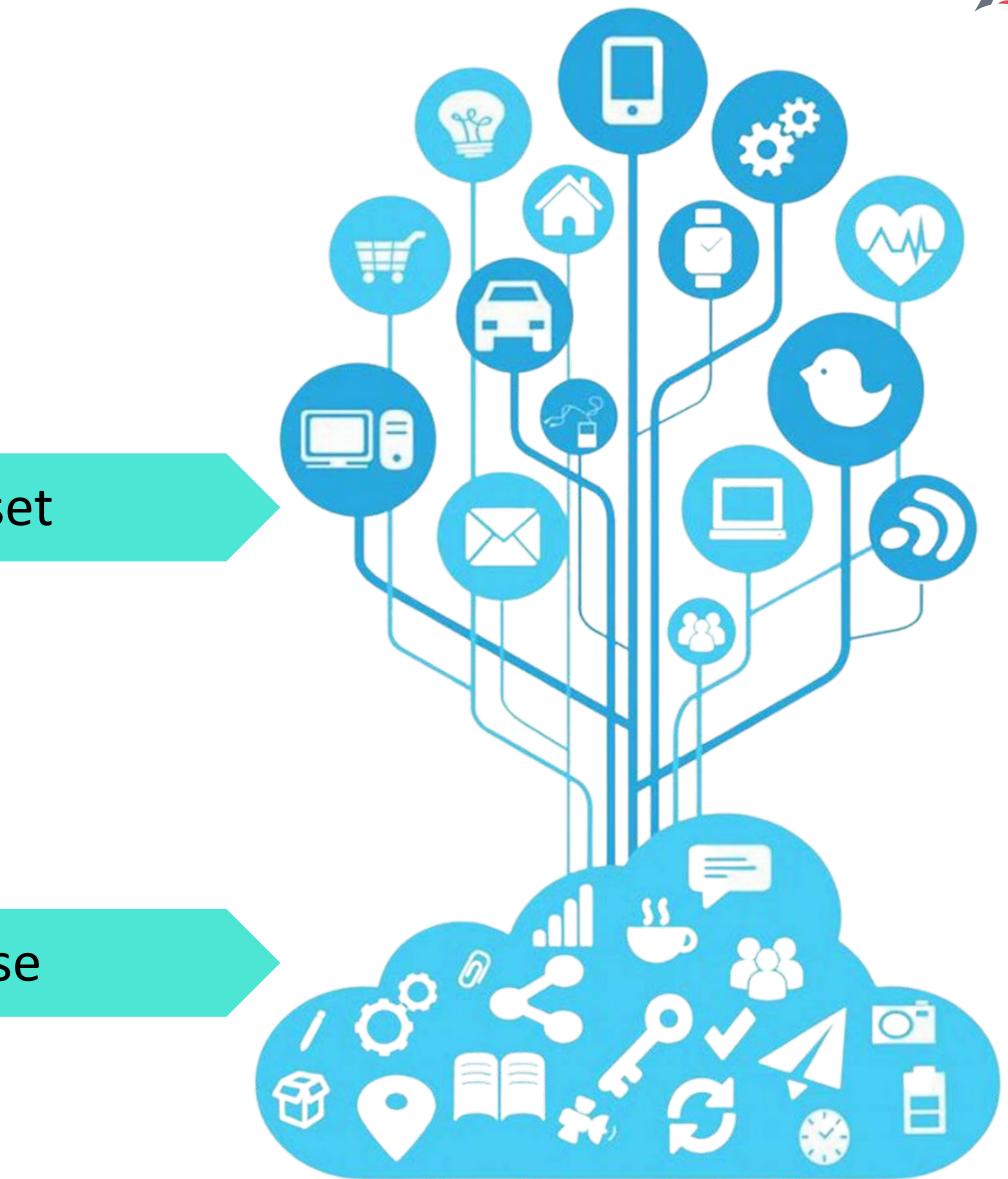
Architecture Overlap

Isolate

Share

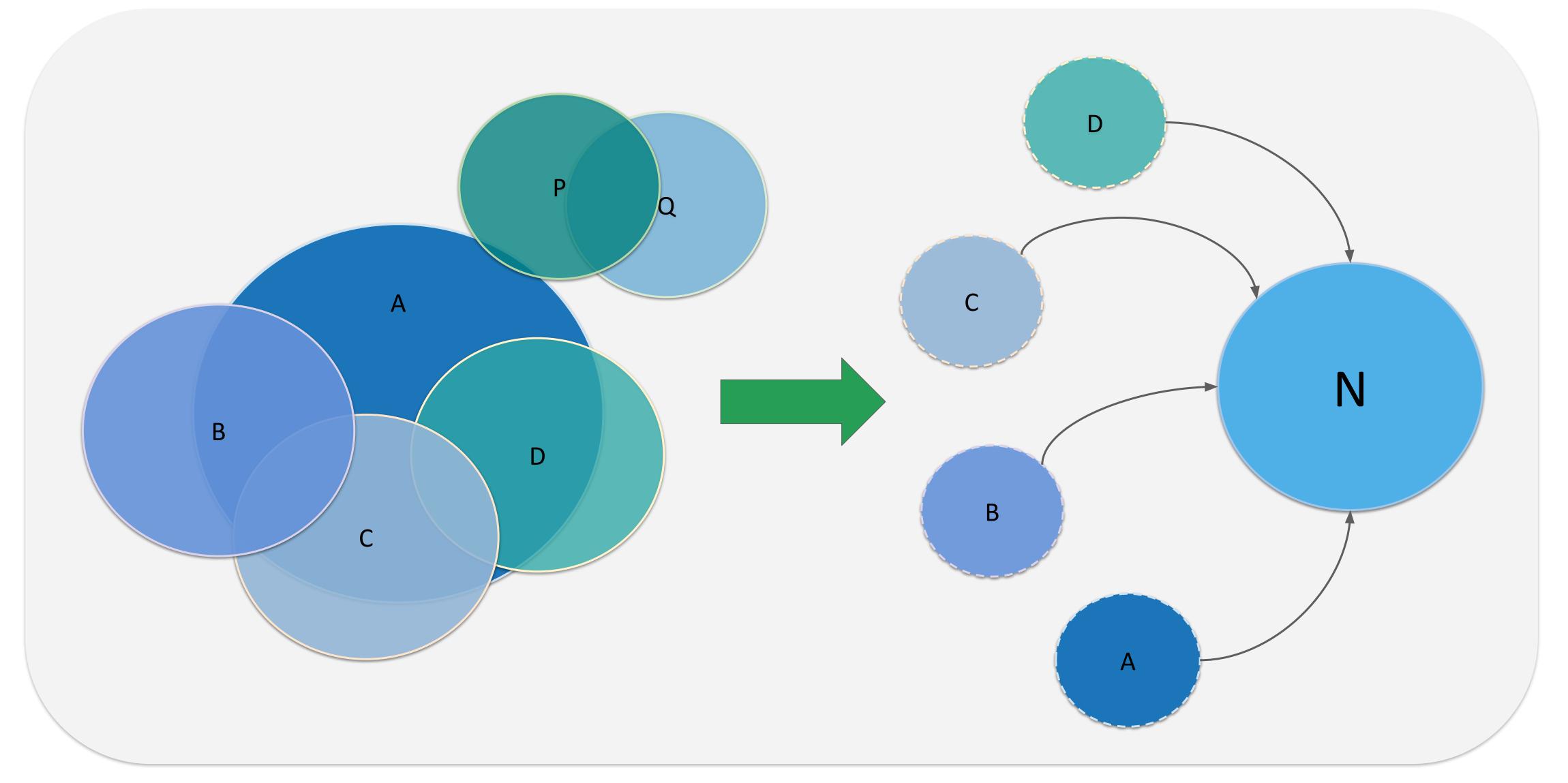
Reuse







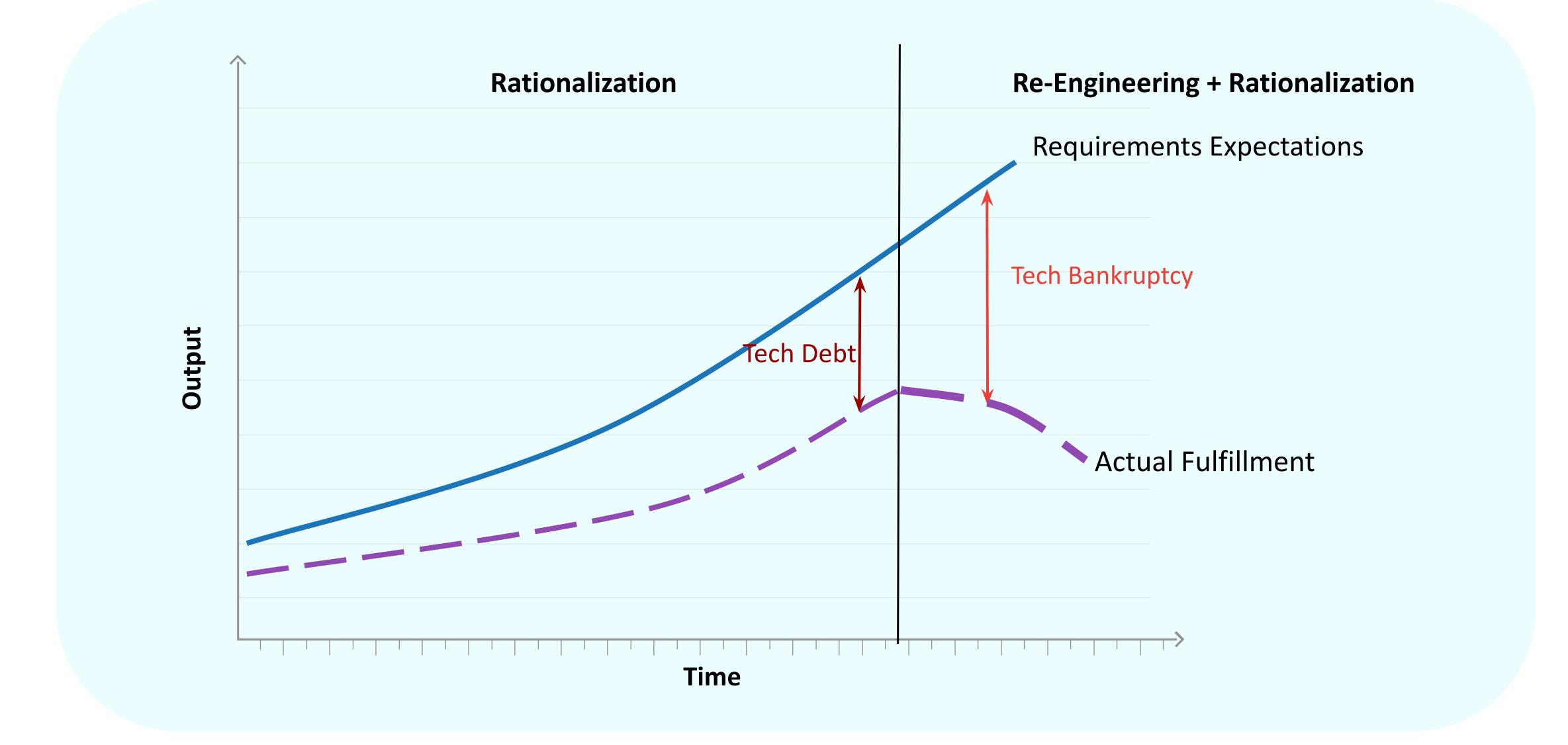
#### Functional Overlap - Big Bang Rationalization + Re-Engineering







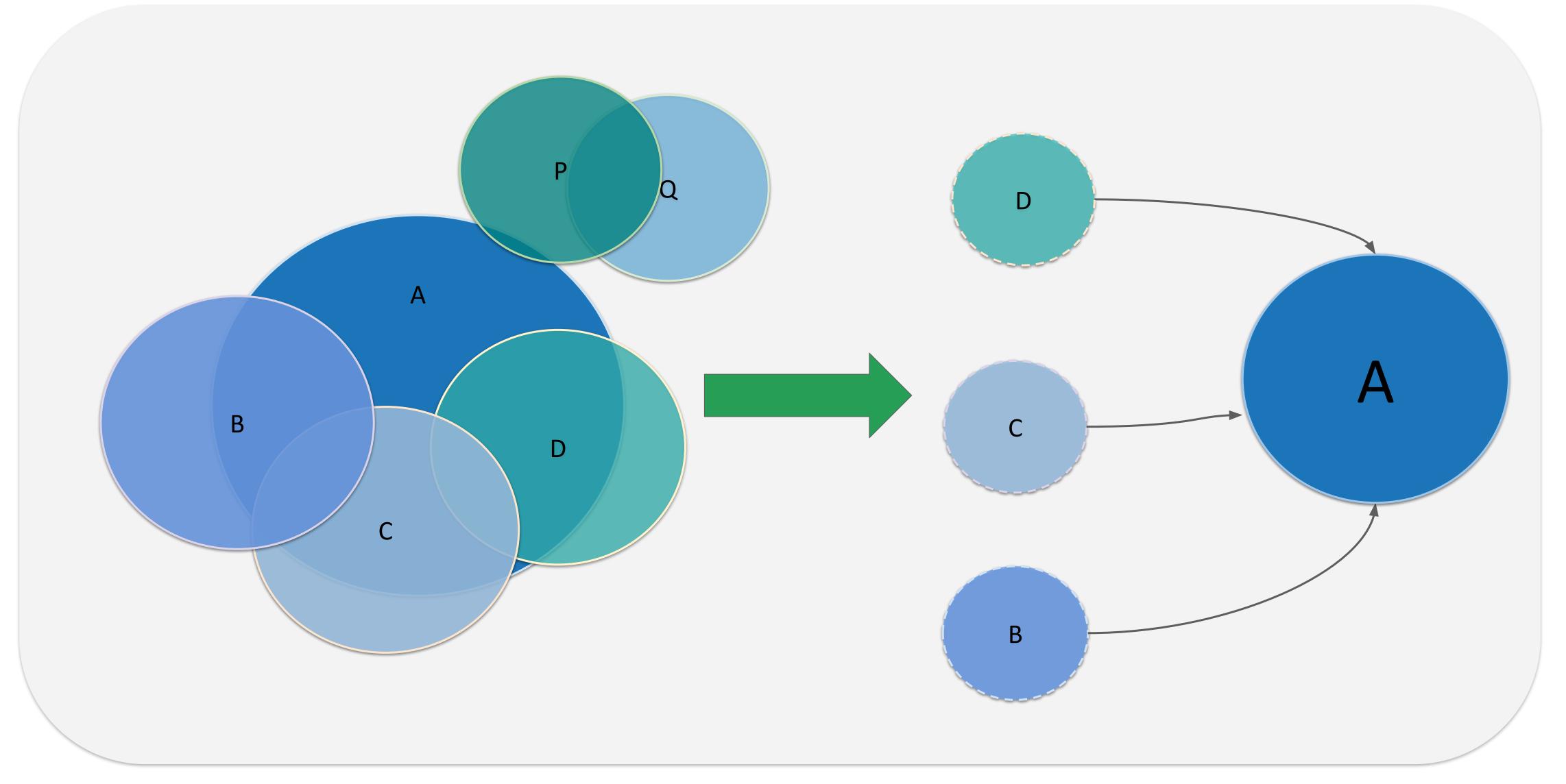
#### Functional Overlap - Risk with a Big Bang Approach







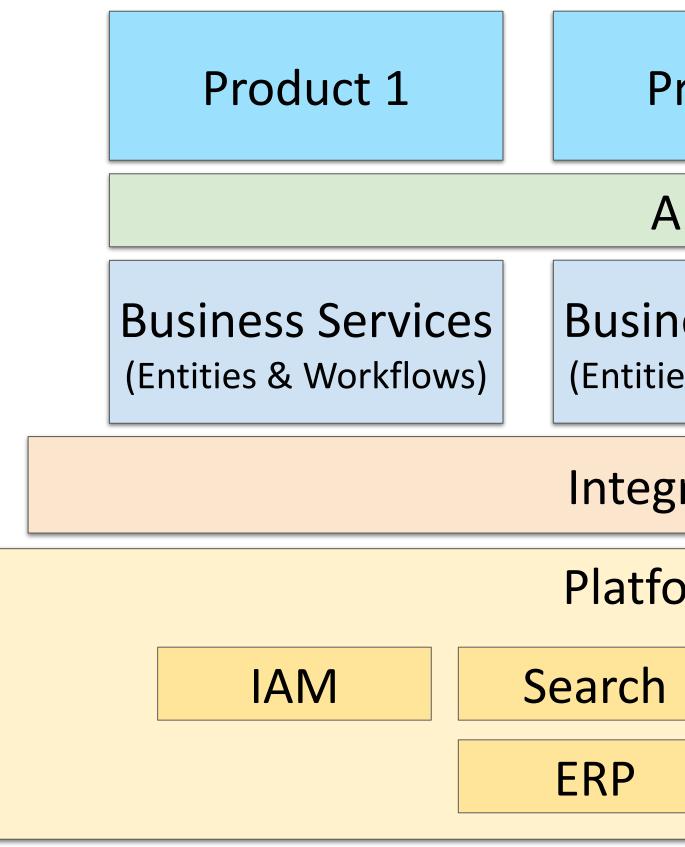
#### Functional Overlap - Consolidate, Migrate and Sunset



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#### **Architectural Overlap - Isolate, Share & Reuse**



#### **Containerization / Virtualization**

#### Infrastructure

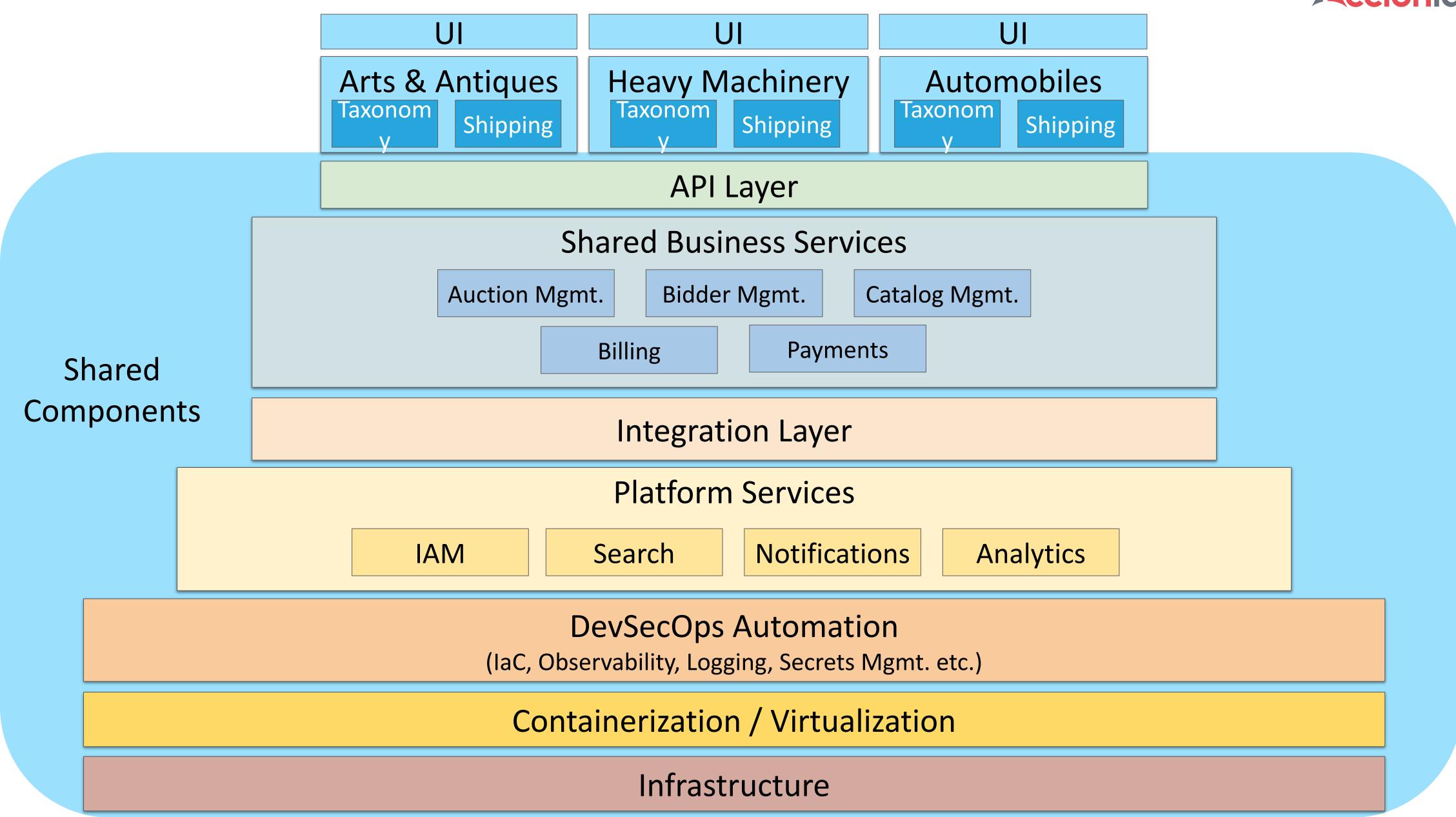


| Product 2                        | Product 3                                   |  |  |  |  |
|----------------------------------|---------------------------------------------|--|--|--|--|
| API Layer                        |                                             |  |  |  |  |
| ness Services<br>es & Workflows) | Business Services<br>(Entities & Workflows) |  |  |  |  |
| gration Layer                    |                                             |  |  |  |  |
| orm Services                     |                                             |  |  |  |  |
| Notificatio                      | Notifications Analytics                     |  |  |  |  |
| CRM                              |                                             |  |  |  |  |

**DevSecOps** Automation (IaC, Observability, Logging, Secrets Mgmt. etc.)



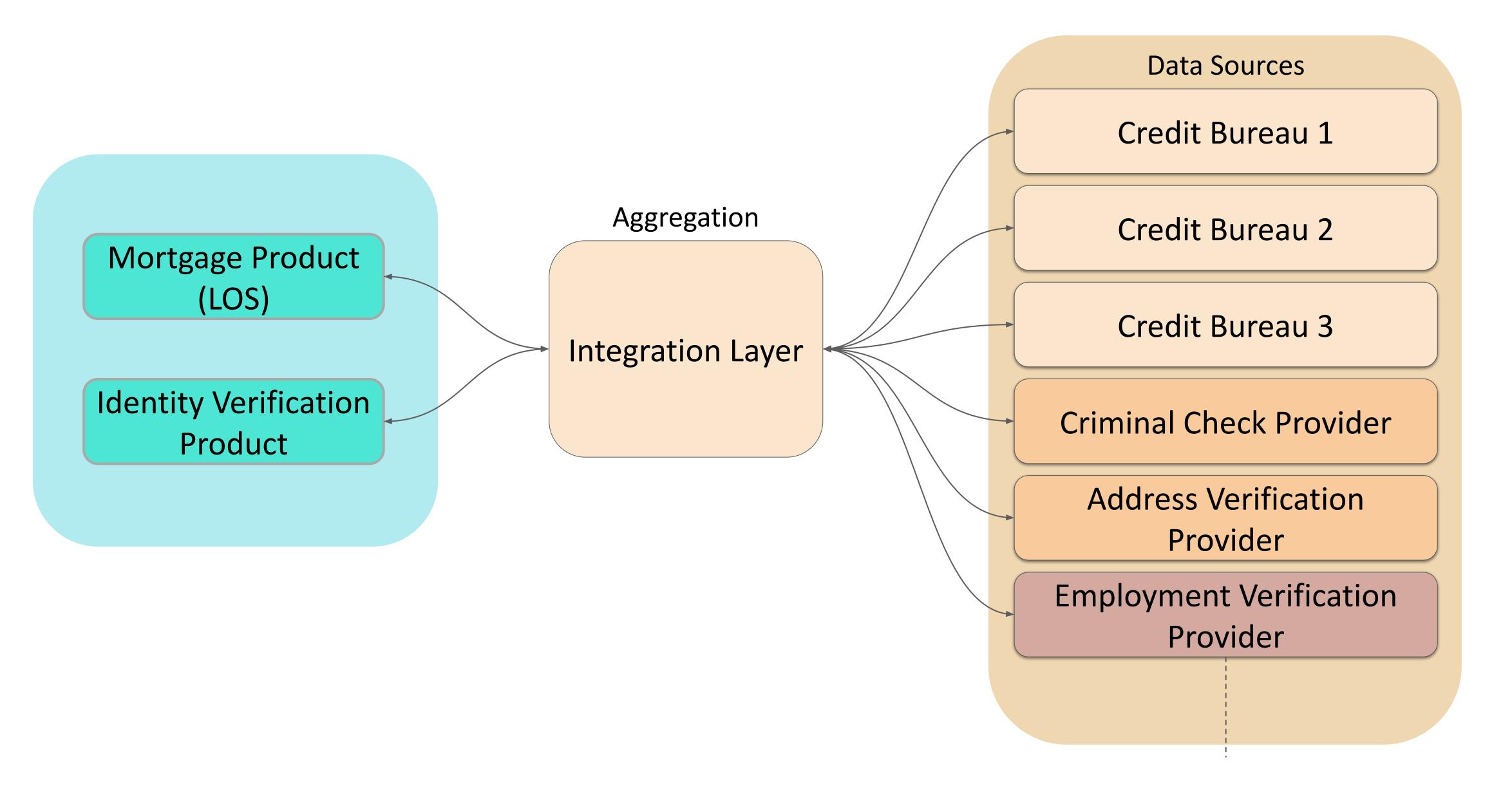
#### **Architectural Overlap - Isolate, Share & Reuse - Auction Platform**







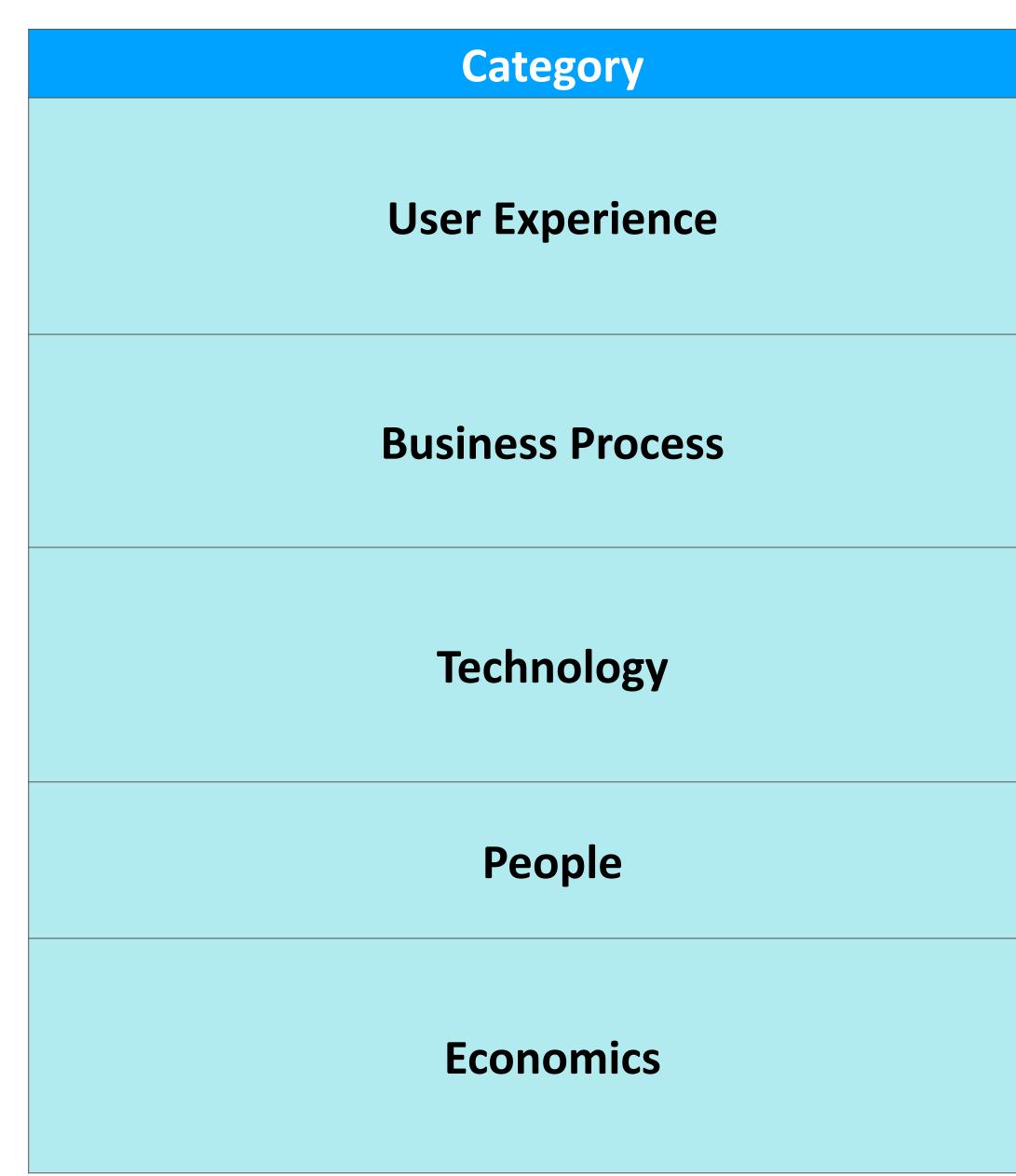
#### Isolate, Share & Reuse - Architectural Overlap - Credit Aggregator







#### **Risks & Considerations**





| Area                                                           |
|----------------------------------------------------------------|
| Adaptability                                                   |
| Feature Parity                                                 |
| Internationalization / Localization                            |
| Workflows and Business Rules Consolidation /<br>Simplification |
| Automation                                                     |
| Current Tech Debt                                              |
| Data Quality / MDM                                             |
| Data Migration                                                 |
| Customer Migration                                             |
| Team Skills                                                    |
| Capital Investments                                            |
| Operational Costs                                              |
| Time to Market, ROI                                            |



Conclusio

- An organization may have a product portfolio either to diversify, segment, add revenue streams or to create adjunct offerings. This can be done either through **M&A or Self Development.**
- Product Portfolio Rationalization is applicable when there is a significant overlap between either the functional elements or the architectural (technology) elements of the products in the portfolio.
- strategy.
- For Architectural Overlap, consider using the Isolate, Share and Reuse strategy. • Each case may be different and shared services strategy may differ on the use cases and architectural components being used.
- There might not be a one size fits all approach. However, we have attempted to document some repeating patterns that have emerged from our experience.

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• For Functional Overlap, consider using Consolidate, Migrate and Sunset





Thank you!!!

Please reach out us for discussing more at:

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