

The Golden Screw Problem: How to achieve Design for Resilience

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Supplyframe

GLOBAL PRODUCT DATA INTEROPERABILITY SUMMIT 2023



Background

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Chief Marketing Officer and Strategy Leader

Entrepreneur and marketing executive with a passion for delivering software solutions to solve real world business challenges for companies in manufacturing, distribution, and retail industries. Solution focus in the areas of strategic sourcing, supply chain management, cognitive analytics, and B2B collaboration. Expertise in sales, business development, marketing, vertical strategy, product management, business planning, and partner program management. Geographic management experience in North America, Japan, Asia Pacific, Europe, and Brazil.

BA and MA Stanford University

Based in Austin, Texas

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About Supplyframe

Supplyframe's industry ecosystem, and Design-to-Source Intelligence (DSI) Solutions, are transforming how people and businesses design, source, market, and sell products across the global electronics value chain. Leveraging billions of continuous signals of design intent, demand, supply, and risk factors, Supplyframe's DSI Platform is the world's richest intelligence resource for the electronics industry. Over 15 million engineering and supply chain professionals worldwide engage with our SaaS solutions, search engines, and media properties to power rapid innovation and optimize in excess of \$150 billion in annual direct materials spend. Supplyframe is headquartered in Pasadena, Calif., with offices in Austin, Belgrade, Grenoble, Oxford, San Francisco, Shanghai, and Shenzhen. To join the Supplyframe community, visit supplyframe.com and follow us on [LinkedIn](#), [Twitter](#), [Instagram](#), and [YouTube](#).

www.supplyframe.com

The Golden Screw Problem

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History doesn't always repeat itself

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Most companies plan for the future based on what they solved in the past



Product Designs are Increasingly Complex

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Each new product is expanding the overall supply chain, which is in turn exposing manufacturers to new risks.



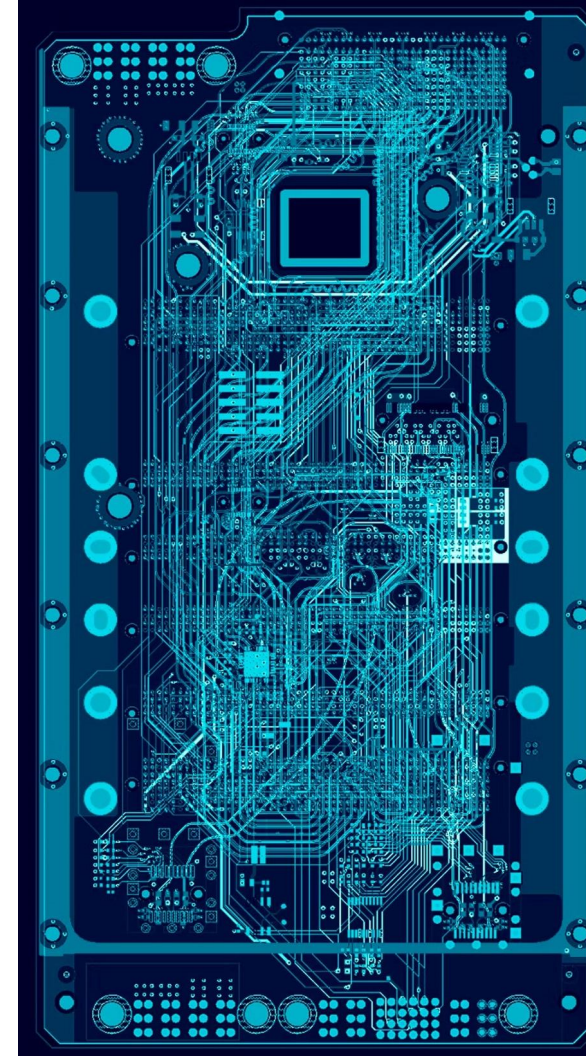
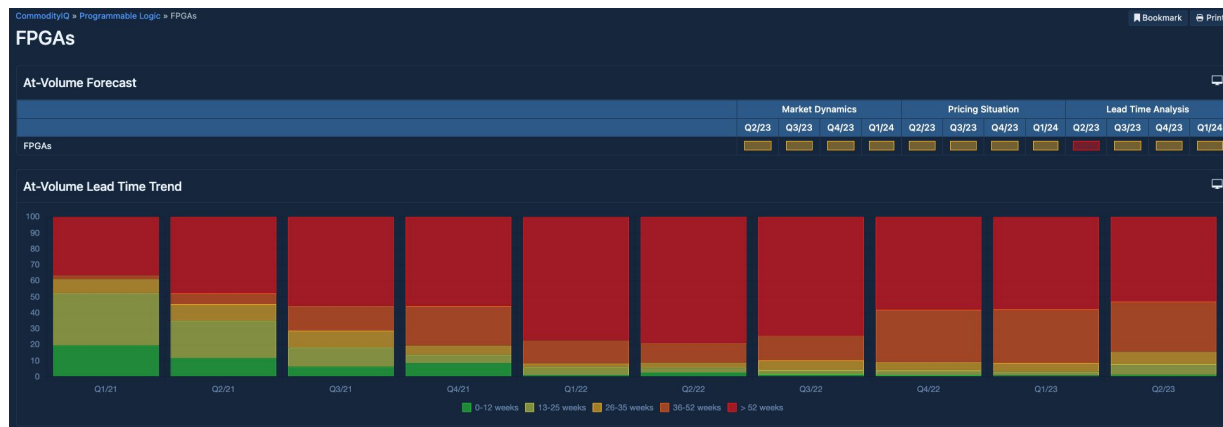
Geopolitical risk



Supply lead time

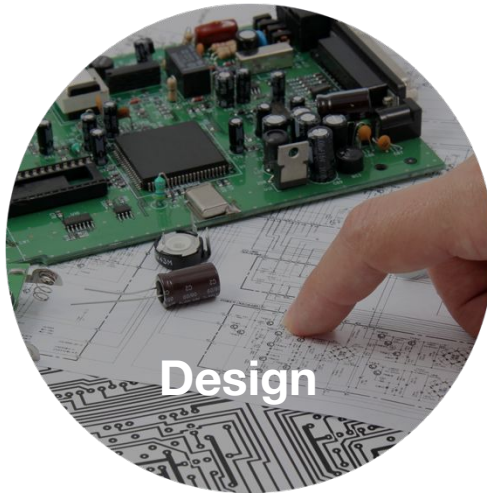


Bullwhip effect



The hidden cost of limited collaboration

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91%

Indicate sourcing issues have caused product launch delays



81%

Report commodity availability has forced expensive spot buys



79%

Say collaboration issues have caused delays in new product introductions

63%

Express the number of indented levels of a BOM have increased significantly

Ineffective process issues have always been hiding below the surface

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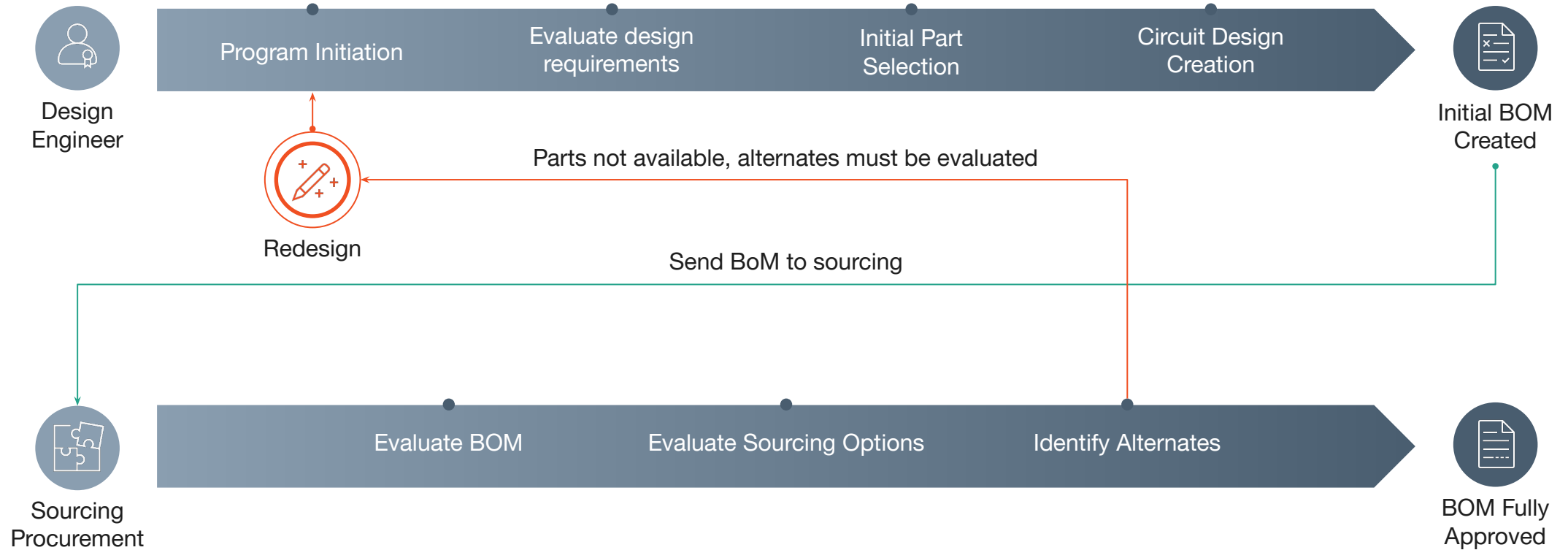
Existing risk management approaches no longer sufficient post COVID

Lack of collaboration between programs & business functions lead to sub-optimal decisions

Reliance on enterprise data is insufficient. Outside intelligence is now required

Constant Redesign Cycles are Contributing to Burnout and are Holding Companies Back

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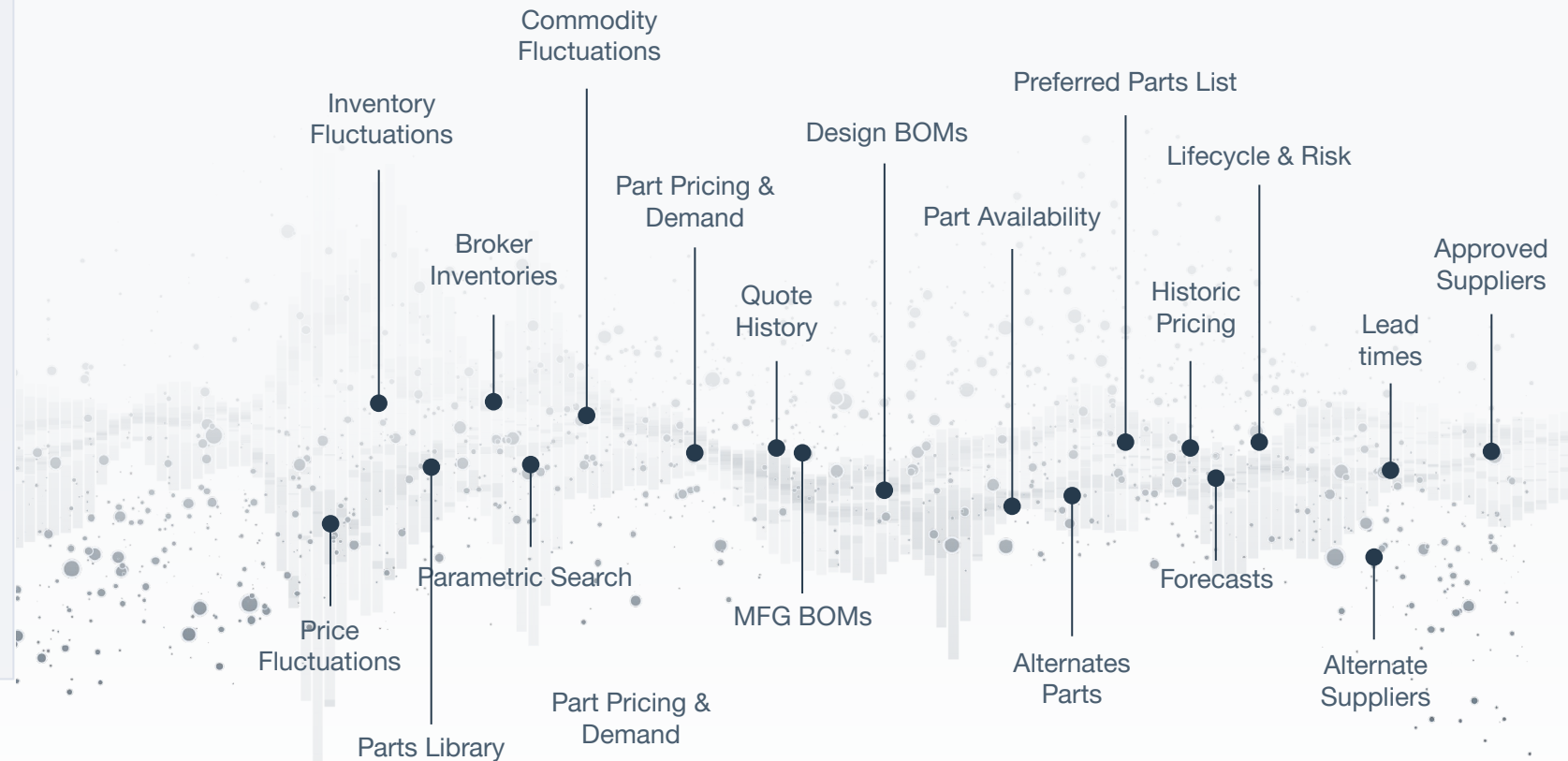
Companies attack the symptoms but not the disease

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Companies rely on
"internal" data that is:

- Static
- Backwards-looking
- Fragmented

Companies try to leverage
"external" data that is not in
context



Unbalanced investment in design-to-source processes has left companies stranded in the digital desert

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\$11B

CAD/PLM



Design-to-Source Transformation Opportunity



Constant Redesigns



Can't Optimize for Cost



Intelligence not
Mapped into
Systems



Delayed Program Delivery

<\$1B

\$18B

SCM



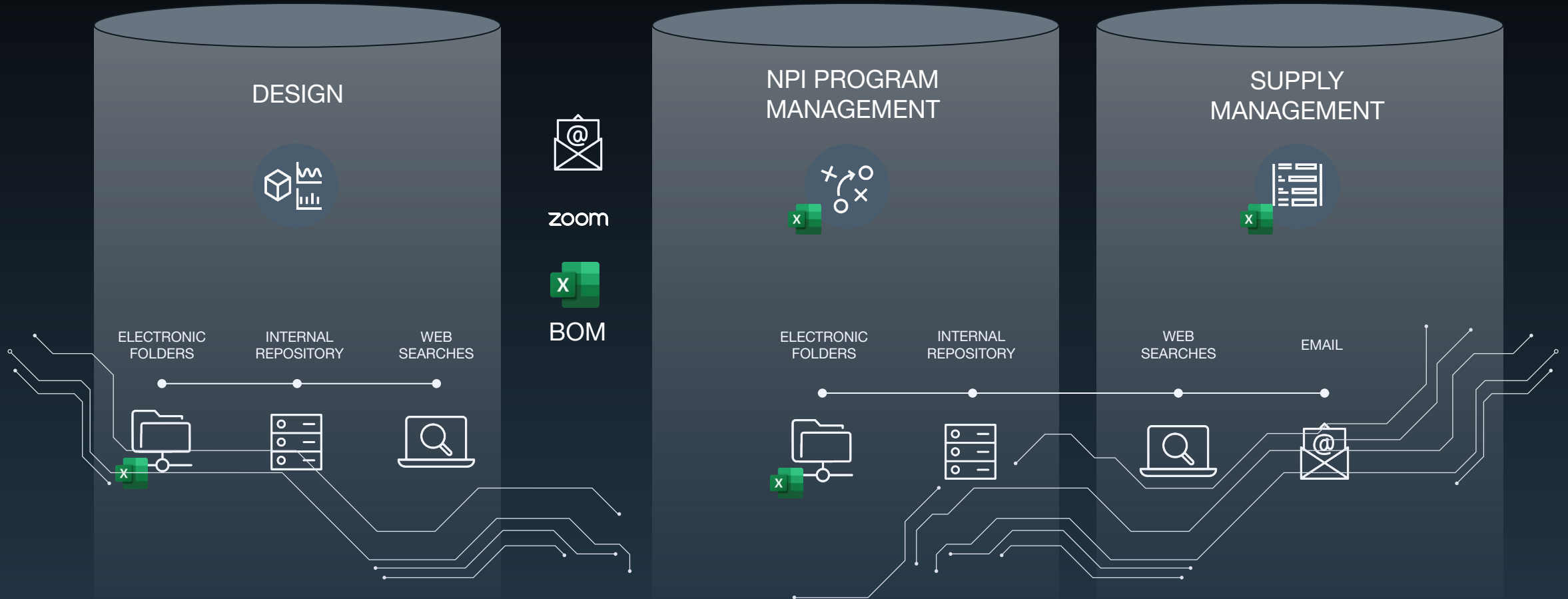
A New Way

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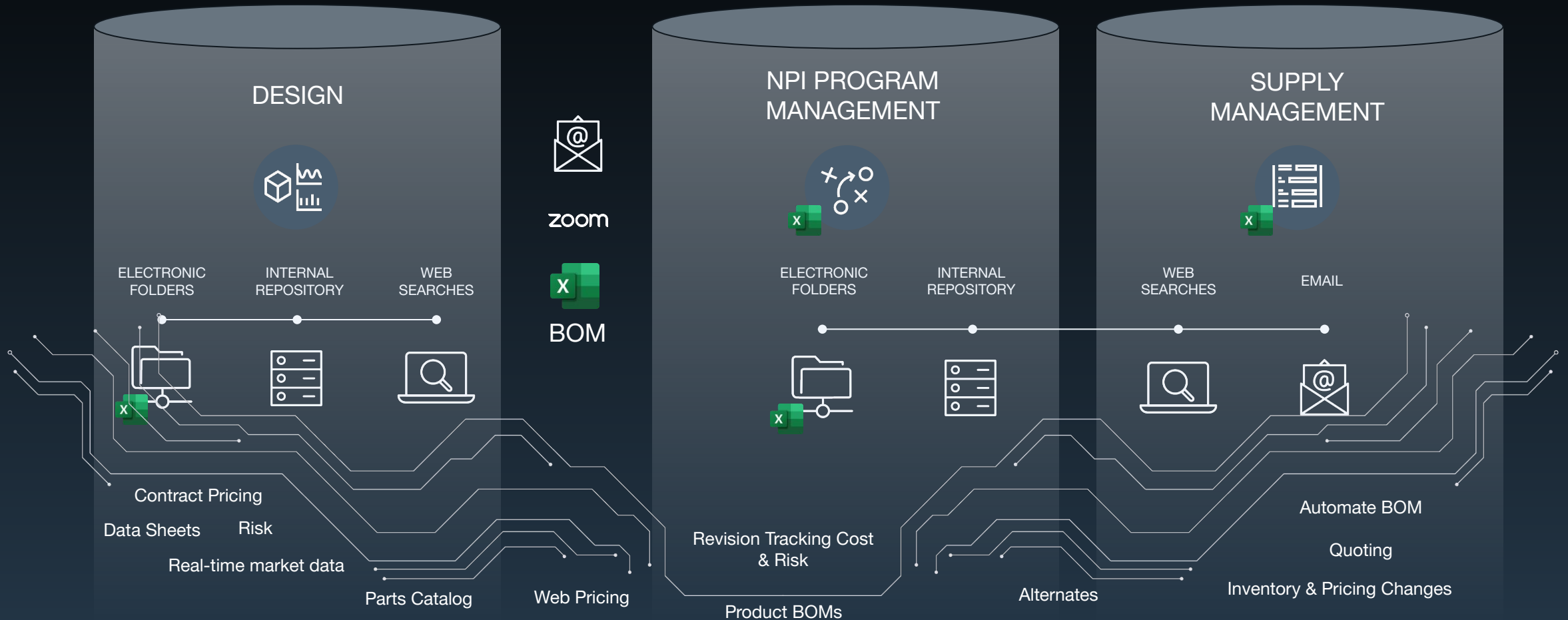
Spreadsheets, Email and Firefighting Limit Design for Supply Chain and Resilience

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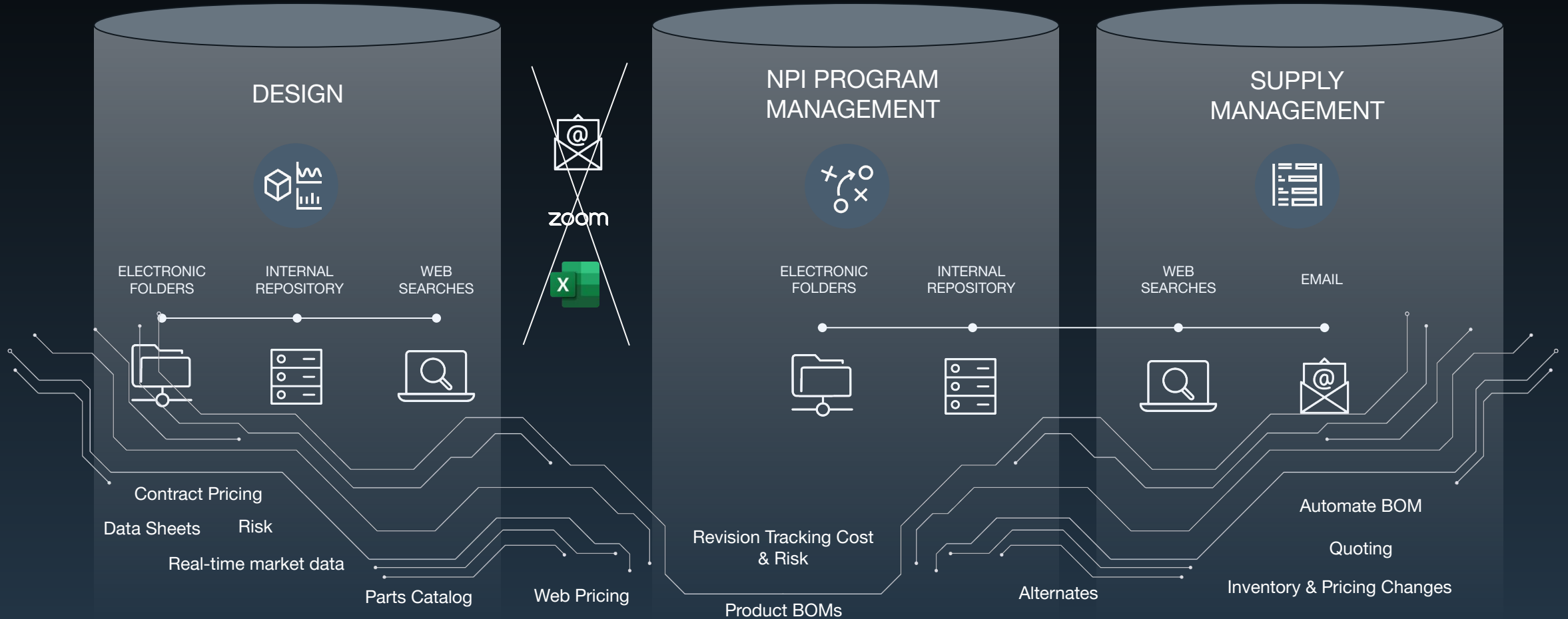
First Step to Bridge the Gap is Shared, Always On Intelligence

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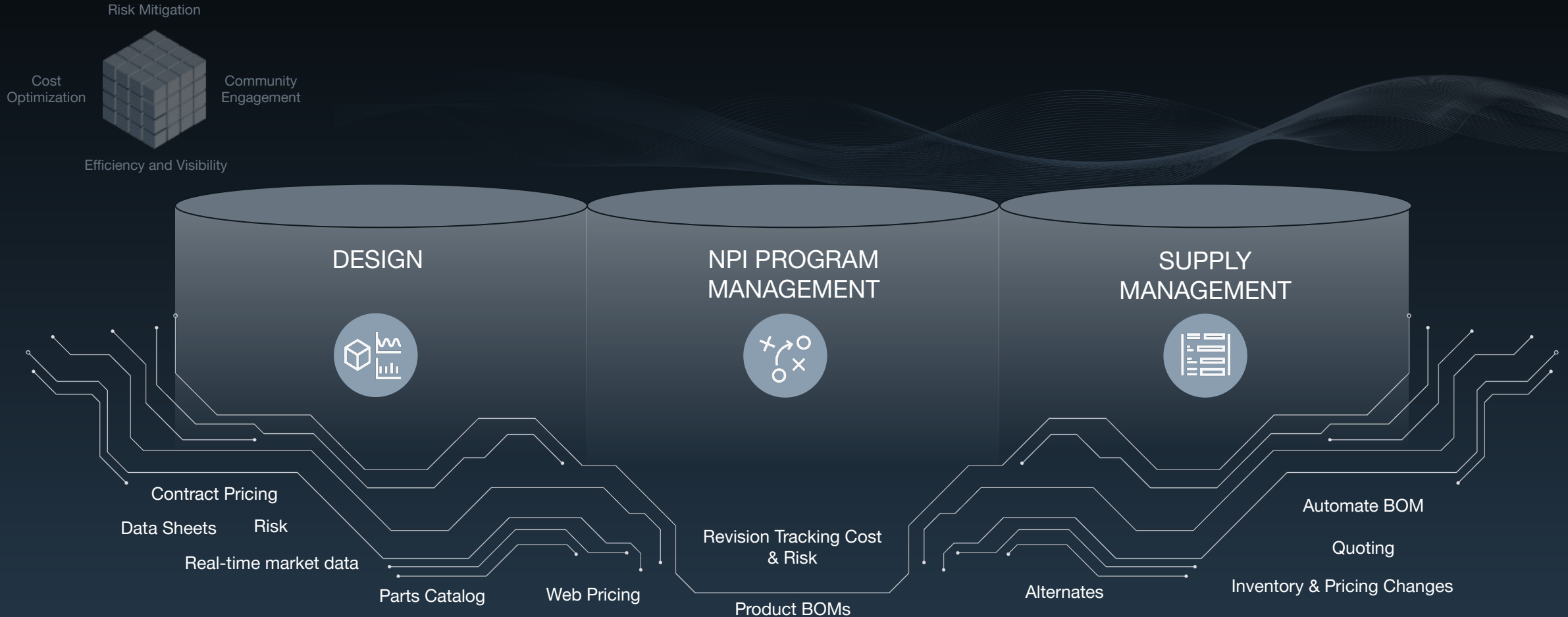
Eliminate the Spreadsheet

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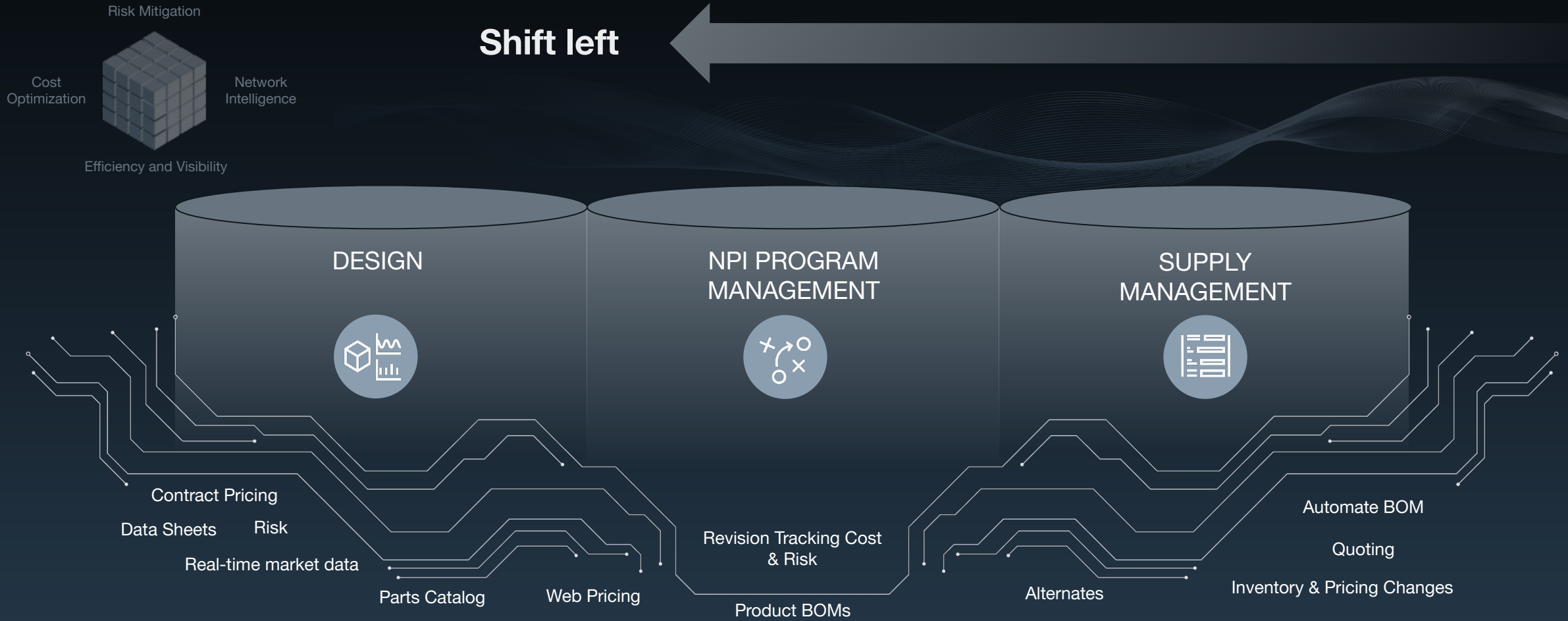
Bridge the Traditional Silos and Enable Collaborative Decision Making with Outside In Intelligence

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Transform

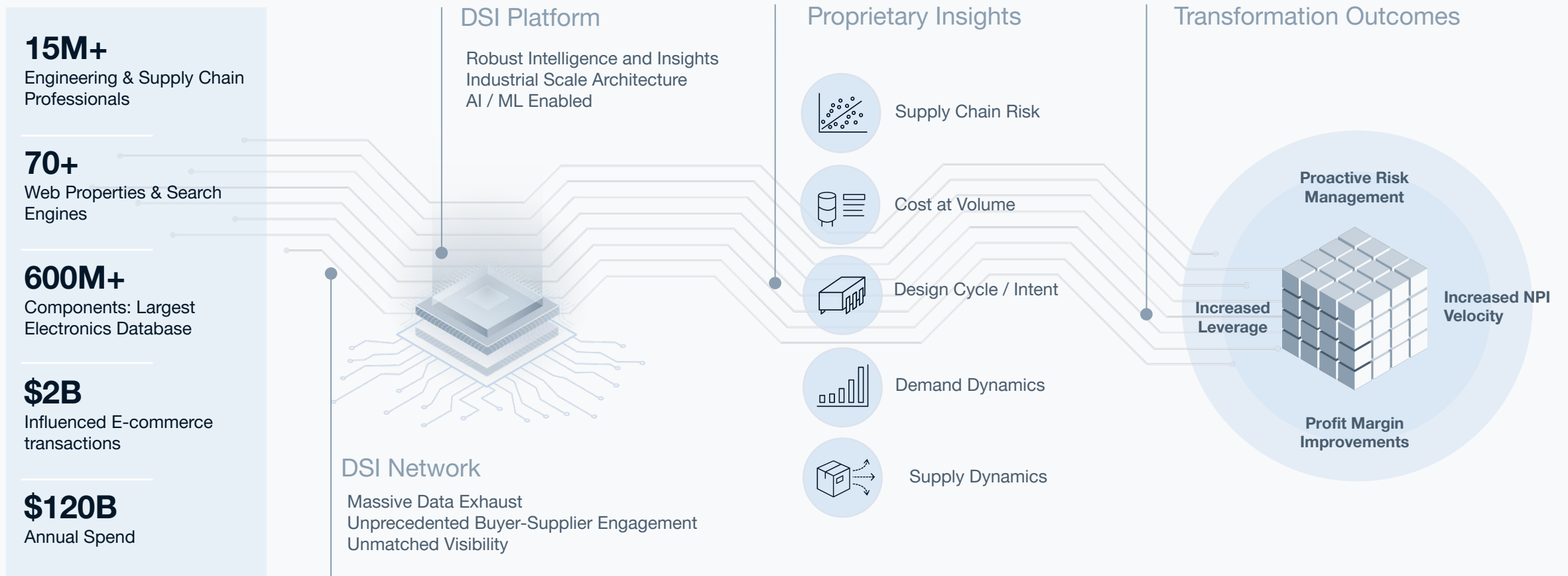
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The Power of the Supplyframe Design-to-Source Intelligence (DSI) Network

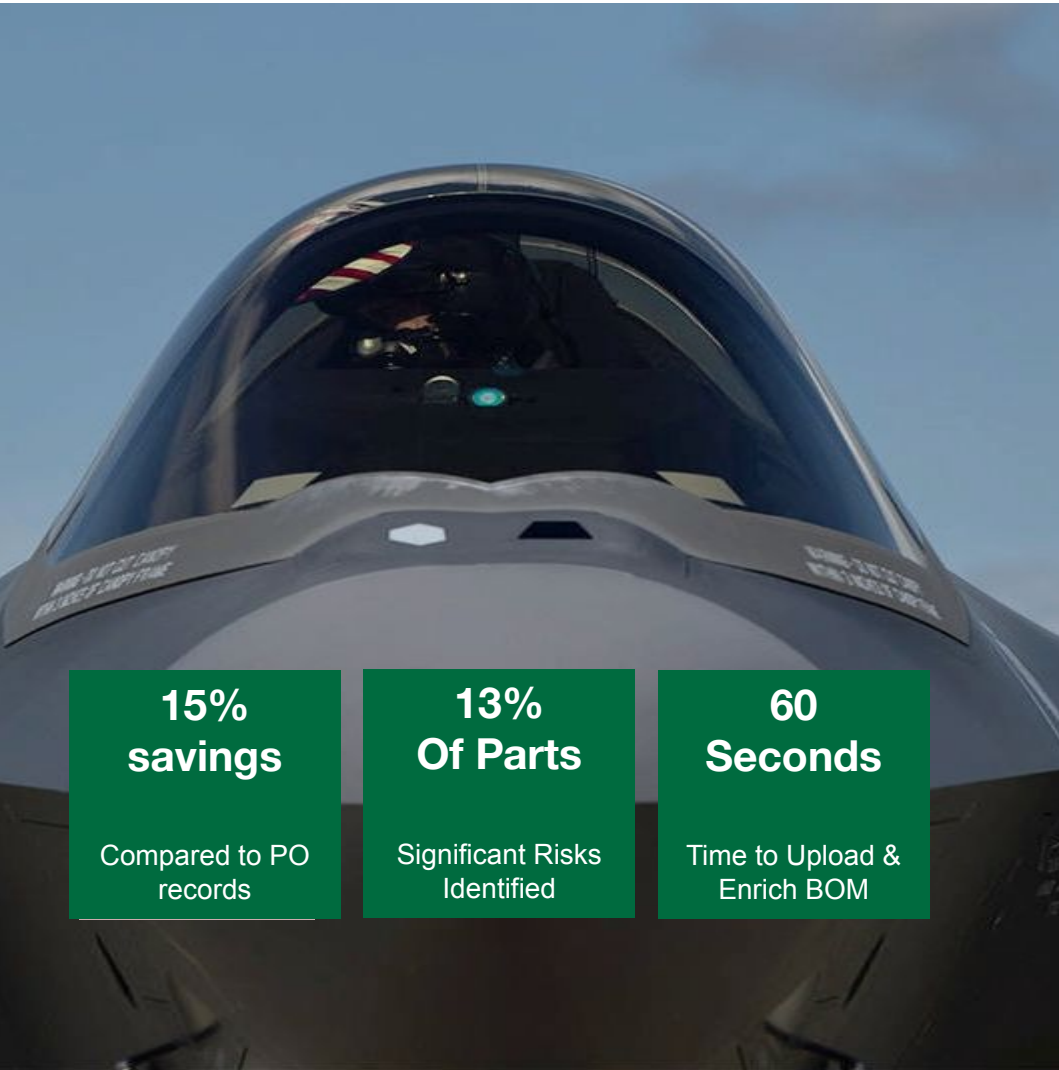
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Massive user engagement fuels billions of “outside-in” data signals, including global electronics design intent, component demand and supply, and risk factors across the electronics supply chain



Major defense contractor reducing risk & with outside-in intelligence

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The Challenge

Current internal databases contain outdated component level information. Internal processes to de-risk design BOMs are highly manual and often bypassed. End result is delays from reacting to unrecognized risks

The Solution

Utilizing outside-in intelligence, combined with context aware enterprise data allowed this company to quickly identify production and sourcing risks. Latest market intelligence provides accurate insights on supply market conditions for each component.

The Results

Quickly zeroed in on incorrect lead time assumptions, leading to better buffering strategies. Correctly identified lifecycle related issues that gave company time to consider risk mitigating strategies. Market pricing intelligence helped company to identify savings opportunities as certain commodities recover from COVID shortages

15%
savings

Compared to PO records

13%
Of Parts

Significant Risks Identified

60
Seconds

Time to Upload & Enrich BOM

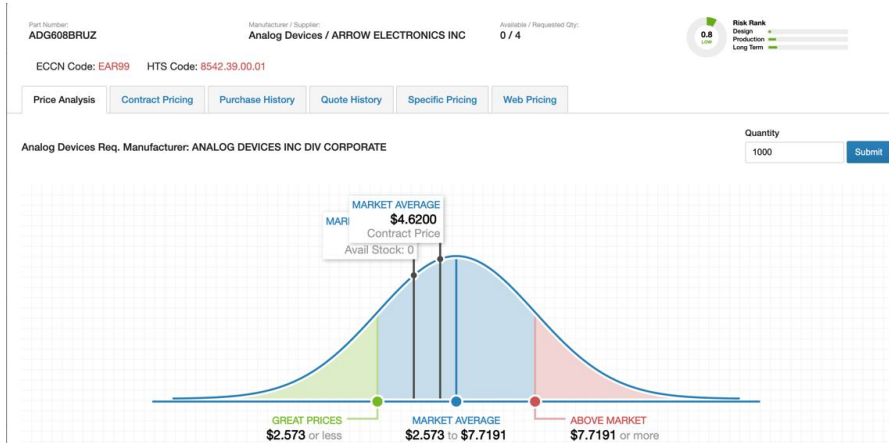
Cost Analysis

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Data Summary

161 parts with real-time intelligence market data
without BOM cleaning

Aggregated quantities by COMPONENT/ASSY



Cost Opportunity Summary

7% potential cost saving opportunity

21% of parts show Web Price as favorable

15% per unit potential cost savings identified within minutes

(Low hanging fruit based on initial non-negotiated web pricing)

- Per unit EEE cost with **AVG PLAN** pricing = \$4,206
- Total cost with optimal pricing** = \$3,570

Lowest Price BOM by Part Category (Avg Plan Price vs Web Price)

Cost By Category		
	Unit Price	Extended Price
Amplifier Circuits	\$44.77 -4.67%	\$46.15 -8.68%
Capacitors	\$7.15 -11.34%	\$132.29 -8.88%
Circuit Protection	\$0.32	\$8.32
Connectors	\$468.75 -54.75%	\$1,618.63 -25.95%
Converters	\$20.88	\$20.88
Diodes	\$228.02	\$752.74
Drivers And Interfaces	\$172.62 -4.22%	\$1,053.18 -0.82%
Filters	\$0.12	\$1.44
Inductors	\$13.77	\$78.10
Logic	\$25.51 -2.50%	\$179.42 -0.77%
Memory	\$41.19	\$111.69
Power Circuits	\$156.41	\$173.64 0.00%
Programmable Logic	\$2,014.21	\$3,314.89
RF and Microwave	\$45.53	\$632.64
Resistors	\$1.07 -44.39%	\$5.24 -26.36%
Sensors/Transducers	\$184.96 -0.99%	\$190.00 -1.90%
Signal Circuits	\$75.73	\$97.78
Telecommunication Circuits	\$10.95 -83.17%	\$10.95 -83.17%
Transformers	\$34.58	\$34.58
Transistors	\$1.32	\$5.28
Unknown	\$22.69 -1.26%	\$107.33 -0.36%
	\$3,570.54 -15.11%	\$8,575.18 -7.09%

** Optimal pricing: Supplyframe solution selects the lowest price between Avg Plan pricing vs. Non-negotiated market price (web price)

Risk Summary



Lifecycle

22 components were identified as obsolete / EOL

1 component not recommended status (<=3 YTEOL)

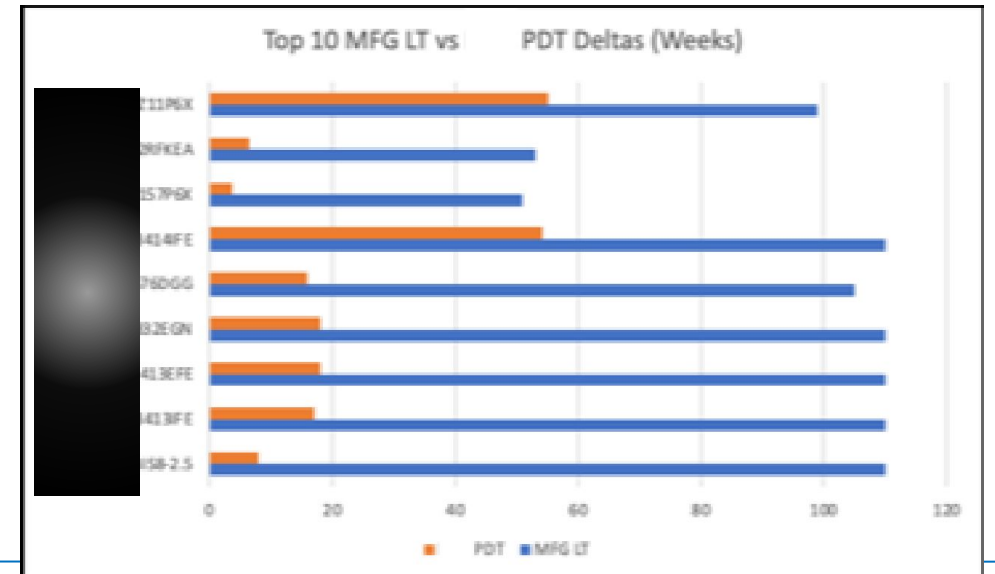
IPN/CPN	Manufacturer Part Number	Manufacturer	Supplier
	SN65HVD20D DISTRIBUTOR PART # V36:1790_0732 0879 ROHS CODE: YES XRef, Form Fit Function Suggested Parts LIFE CYCLE: NOT RECOMMENDED OPN SN65HVD20D	Texas Instruments REQ. MANUFACTURER: TEXAS INSTRUMENTS INCORPORATED DIV	Arrow Electronics * STOCK 0 LT 35W MIN 150 MULT 75
Country Of Origin Mexico		YTEOL .96	

Lead Time

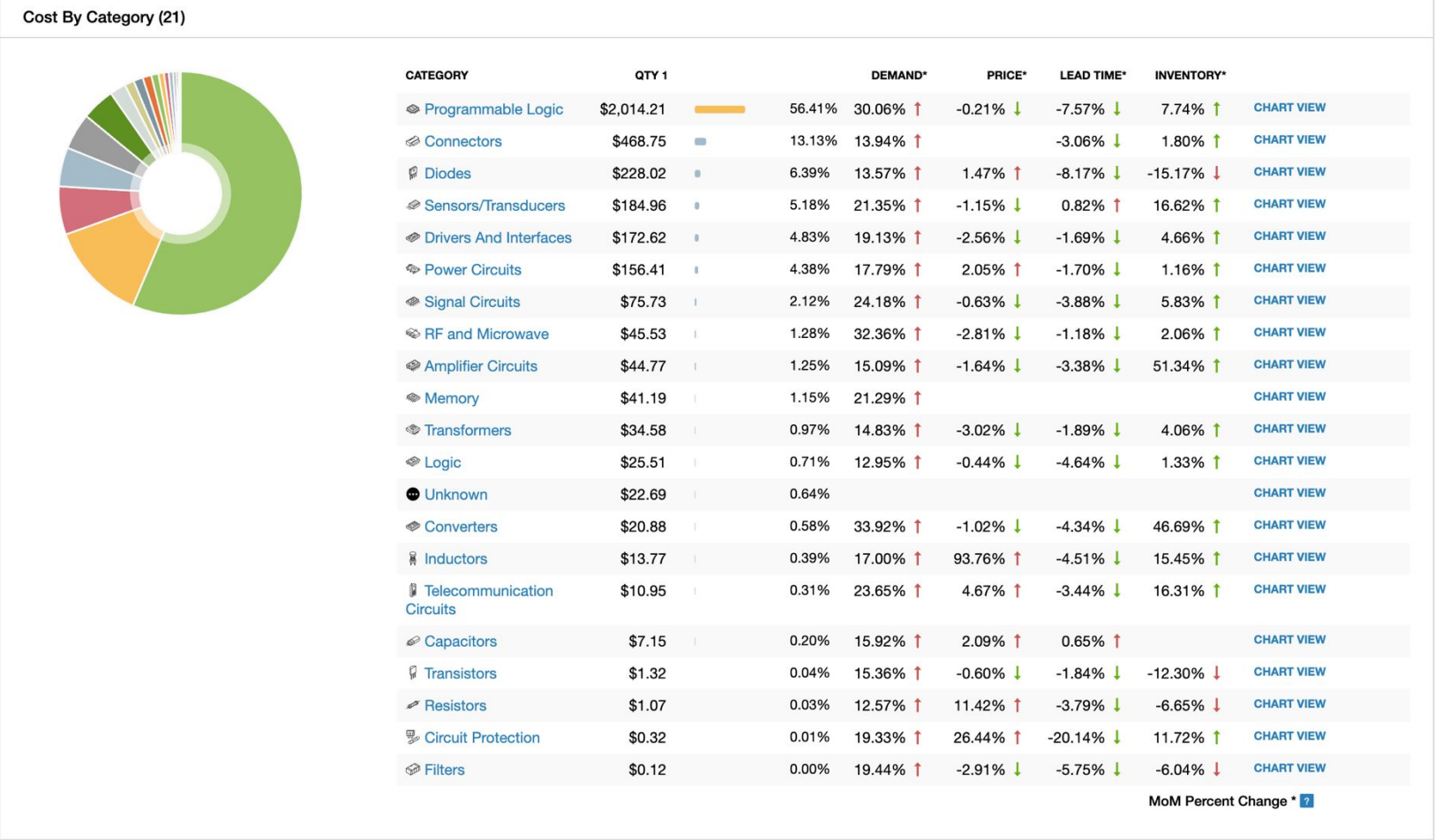
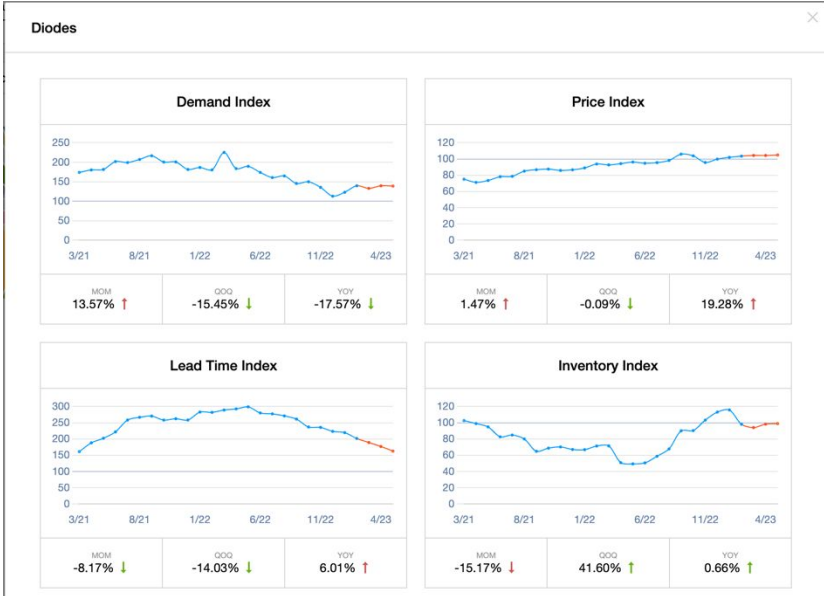
21 components (**13%**) presented a longer manufacturing lead time than PDT

120 weeks max lead time variance (Most Recent Manufacturing Lead Time vs PDT)

83 components presented a shorter published lead time than PDT—a potential inventory reduction opportunity



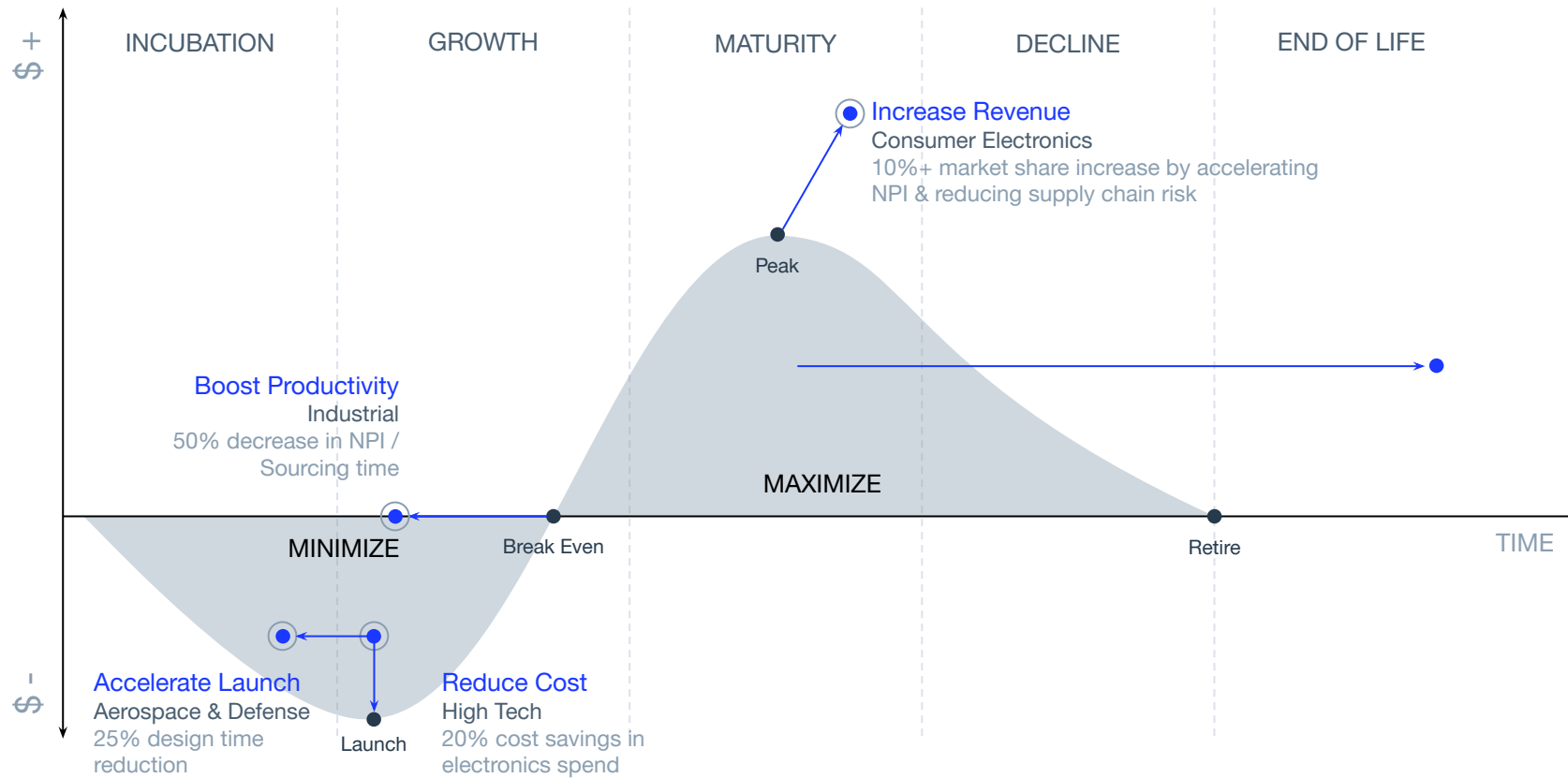
Month-Over-Month Changes



Value Generation across the Program Lifecycle

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Lifecycle Impact



Thank You!