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The Human-Centric Factory

Keeping humans at the center of how a factory operates and creates value is the single-most important consideration for manufacturers to recover quickly and to accelerate future growth leveraging technology.

www.propelland.com

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Customers want speed, transparency, and customization

The convergence of technologies like 3D printing and digital business models bring the end customers closer to the manufacturing lines than ever. Flexible supply systems and new models that create and capture value direct from the factories is essential to gain control of demand and ensure long-term business sustainability.

What is the right balance between what is urgent and what is important?

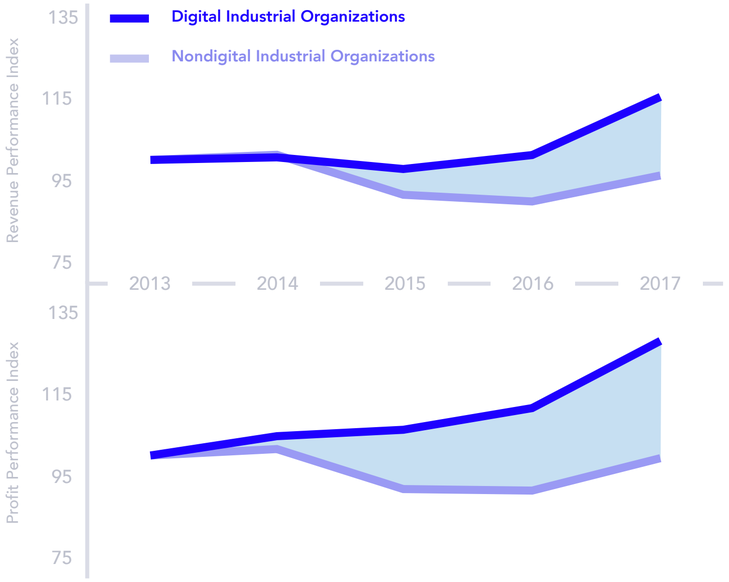
80%

Manufacturers surveyed in the US anticipate negative financial impact from COVID-19

Top 3 concerns for manufacturers:

1. Worker & employee safety
2. Customers' responsiveness and demand
3. Reprioritization of initiatives and development

National Association of Manufacturers (NAM)



Digital initiatives impact the top and bottom lines and perpetuate the competitive advantage gap

International Data Corporation (IDC)

> "There is no digital transformation without a cultural transformation."

+ Digital transformation is no longer an option but a must

To overcome the market shock and long-term stagnation manufacturers must leverage digital technologies and an agile mindset.

> "We know what our customer needs before they know it."

Δ Change is dictated by the end customer

Manufacturers need to know their customer's customer to predict demand and turn knowledge into new value.

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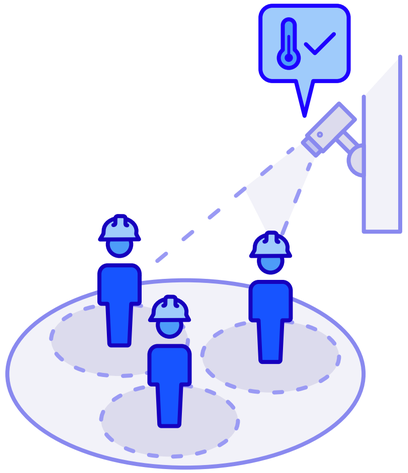
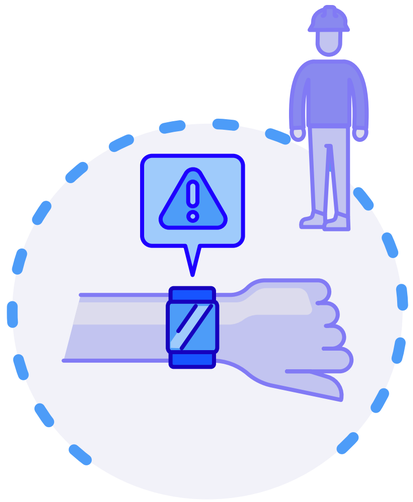
Adapting factories for the new normal



Ensure the health and safety of your workers through cohorts for shifts, automated safety systems such as thermal cameras for temperature checks, UV sterilization, and frequent cleaning of common areas.

ENSOLUM ENVIRONMENTAL & HYDROGEOLOGIC CONSULTANTS

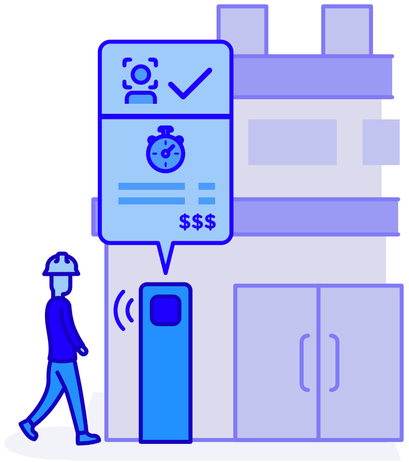
Ensolum provides employee screening stations that can determine employees' temperatures



Provide **guidelines for safe behavior, PPE and wearables or tracking apps** to ensure workers maintain safe distance apart, or track worker contact in case of infection, like bracelets that alert people in close proximity.

fitbit

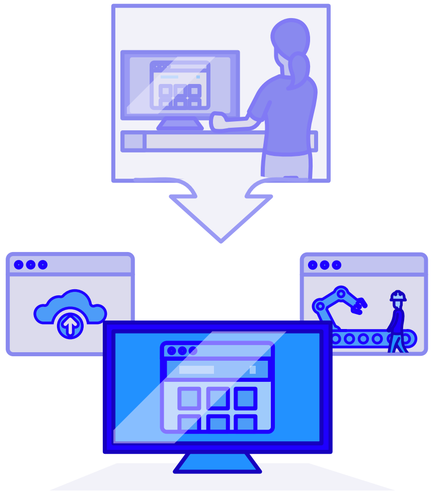
FitBit and Stanford Medicine are researching how wearables can help detect and track COVID-19



Implement **touchless tools for employee time tracking, digital payments, and management** that can build towards full workplace digitalization. e.g. touchless kiosks for clocking in/ out and tracking paychecks.

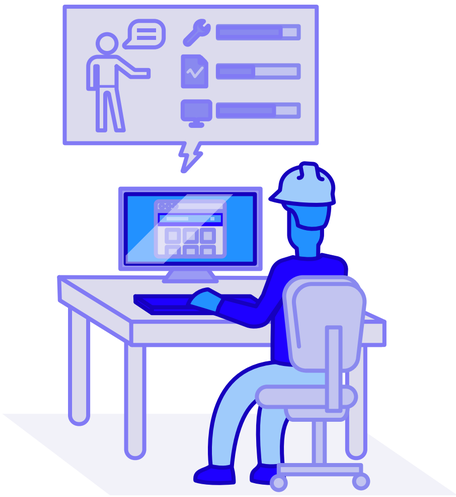
DEPUTY

Deputy enables employees to clock in and out of work with facial recognition and voice commands



Implement **process automation throughout production and operations** to reduce employee cross-contact and **enable quality control and monitoring** to be automated or managed remotely.

Boston Dynamics's Spot is an industrial robot for digital twins creation, detection of leaks and anomalies, and more



Provide **remote training platform for workers to expand skillset and increase flexibility**, and tools for promoting health and wellness. If shifts are reduced from decreased demand, assign online training to increase flexibility in the workforce.

AdaptiveU

AdaptiveU provides a cloud-based training platform for industrial workers

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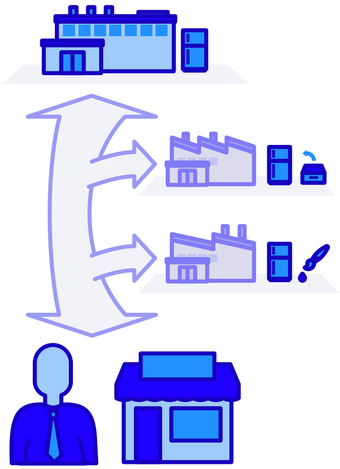
Building direct connections to end-customers

Identify end-customer-facing products that incorporate goods and materials you produce, providing an avenue to **reach end users through a DTC brand** and potential collaboration with other value stakeholders.

RAZER

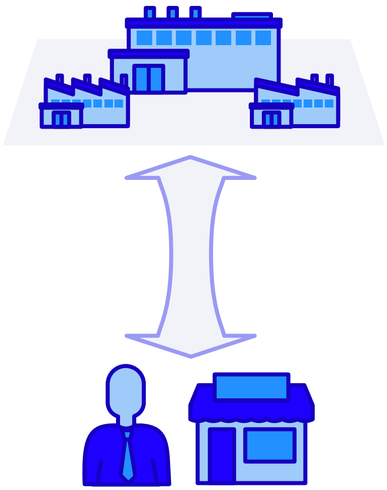
Razer, a gaming accessories brand, switched production to face masks sold through vending machines



Use DTC e-commerce channels **to control demand and provide leads from end-customers to your direct B2B customers** for a lead-generation commission.

paintzen

Paintzen, owned by PPG Paints, is a single source for homeowners to get quotes, schedule painters, and pay



Alternatively, **integrate vertically with specific B2B customers to capture higher margin** in the transaction. Avoid channel conflict by specializing geographically or with a niche product.

KATERRA

Katerra offers complete vertical integration, delivering design sketches, materials, and building construction

Extend your value proposition through adjacent products to extend the relationship with existing customers, working towards building a two-sided marketplace aggregating offer and demand.

Nestlé

Nespresso from Nestlé, extended to nutrient-fortified teas as part of a wellness platform

Collect data from the value chain through existing and new touchpoints. Use data and learnings to predict demand, increase operational efficiency, reduce excess product storage, and increase market breadth.

Perrigo

Perrigo co-created gr8ness.com to provide wellness content for consumers

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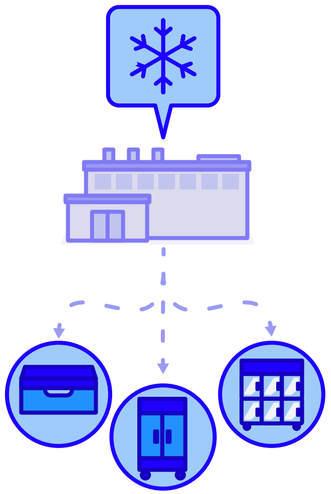
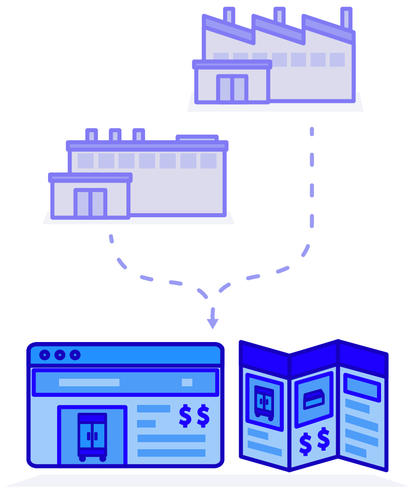
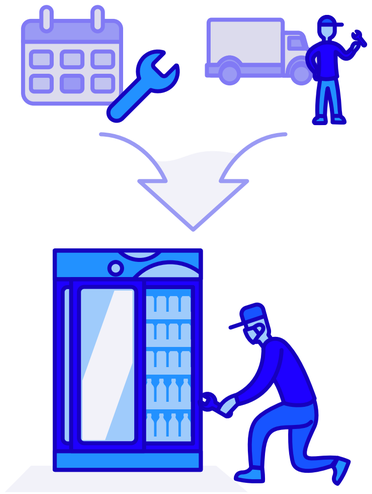
Growing towards everything-as-a-service



Identify your core value proposition and double down on it, e.g. an industrial refrigeration manufacturer grows offering from selling fridges to on demand cooling and storage for last mile delivery.



Digitize together with your customers for visibility into customer behaviors to enable efficiencies and provide richer services for customers. Access technology faster through partnerships or acquisitions.



Build deeper relationships with B2B customers through an ecosystem of products and services that allows them to grow, e.g. routine maintenance, on-demand added capacity for surges, modular components, and alike.

Radically transform the core offering from product to solution and increase the LTV of a customer e.g. cold-as-a-service by a refrigerator manufacturer moving from a per fridge sale to a per usage or subscription model.

Build the team and the network of partners that will support continued innovation to grow share in existing or new growing markets, e.g. intelligent temperature control for smart homes and businesses.

HP Device as a Service offers a holistic B2B IT solution with hardware, management, and analytics bundled in one

Cemex Smart Silo installs sensors in customers' cement silos, delivering seamless, uninterrupted supply service

Caterpillar's CVA provides customer machines with replacement parts and service coverage

Philips Light as a Service provides tailored lighting solutions and services for a monthly fee, no upfront cost

Ericsson evolved from a phone manufacturer to being 1 of 5 companies worldwide with 5G tech

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THE HUMAN-CENTRIC FACTORY

End to end

	Suppliers	Employees	Operations	Production	B2B Customers	Distribution	End Customers
Recovery	**Inventory Buffer** Build up inventory of key resources to avoid shortages in emergencies.	**Health & Distancing** Automate employee health checks and encourage safe distancing and behavior	**Process Automation** Leverage PA to streamline and digitize operations.	**APM** Use sensors to establish predictive manufacturing and maintenance.	**Partner to Add Value** Partner with key B2B customers to enable richer service offerings.	**Decentralize Distribution** Use partnerships to create local deployment centers.	**Rich Storytelling** Engage end-customers through relevant content, build a connection, and learn about their needs.
Growth	**Predictive Analytics** Encourage suppliers to digitize, providing visibility into supply chain.	**Training** Provide digital training to expand employee expertise and accelerate transformation.	**Innovation Pipeline** Use R&D to develop innovative product service offerings beyond core goods.	**Factory as a Service** Maintain operations during slow periods by lending capabilities to other companies.	**Vertical integration** Integrate with key B2B customers to increase capabilities and offerings.	**Logistics Tracking** Digitize distribution to track goods through the value chain and optimize logistics.	**Build DTC Touchpoints** Create channels to reach end-customers directly and collect customer data.
Transform	**Open Innovation** Partner with universities and material entrepreneurs to develop improved material performance.	**Labor as a Service** Use flexible workforce of skilled labor to expand bandwidth or extend work to other factories.	**Value-Oriented Business** Transform to provide a core value through goods and services as a subscription.	**Industry 4.0 / IIoT** Implement smart machinery, sensors, and monitors	**Funnel DTC Business** Use DTC channels to share business with key customers in your value chain.	**Warehouse as a Service** Rent excess warehouse space through existing platforms to generate income.	**Leverage Data** Use customer data to drive internal innovation and new services.

Data for Growth and Transformation

Suppliers	Employees	Operations	Production	B2B Customers	Distribution	End Customers
Anticipate Resources Preemptive action for delays and bottlenecks	**Employee Behavior** Optimize workforce, identify risks, and build towards automation	**Process optimization** Zero inventory fulfillment, On-demand labor	**Anticipatory Production** Reduced downtime, optimization, QA	**Adding Business Value** New customers and business opportunities that improve your value	**Value Chain Tracking** Optimize logistics and distribution, and mitigate risks to goods	**New Markets & Segments** Brand expansion into adjacent markets and valued services

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Methodology to accelerate impact

“The role of propelland is to help accelerate immediate impact by bringing to life solutions that add value in people's lives. We are hacking ways to recover better and faster.”

Hugo Giralt, Founding Partner and CEO, propelland

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Accelerating Transformation for Immediate Results

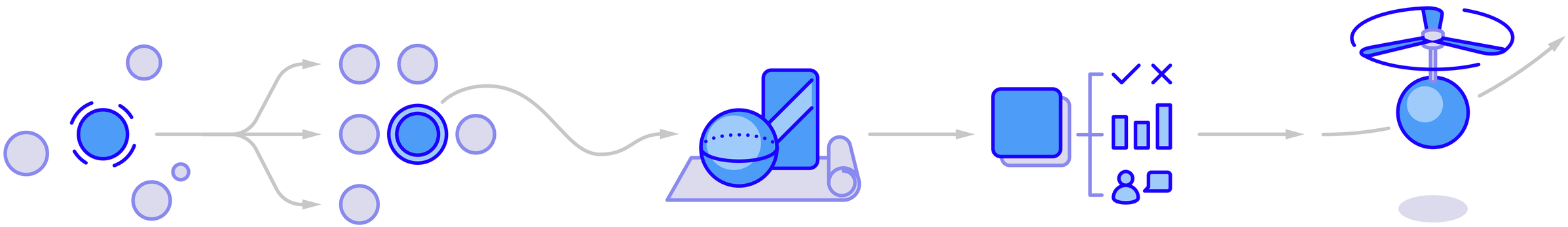
Day 1
Defining the Challenge

Day 2-3
Redefining Value Prop + Pipeline

Day 4-5
Prototype Strongest Value Propositions

Week 2
Market Pilot to Gather Data

Week 3-X
Optimize, Scale for Full Launch



Analysis of the current business and market context.

Analysis of the current value proposition, and planned pipeline.

Map customer journey and identify pain points.

Brainstorming sessions to redefine value propositions and pipeline.

Create solution canvases to define ROI potential, and key assumptions.

Prioritize solutions to pick the top 1-2 to prototype.

Define MVP features/functionalities and success metrics.

Design mockups/prototypes to test MVP hypotheses and assumptions.

Define plan to generate demand during pilot.

Run limited pilot to gather data to measure success: customer value, ROI potential.

Iterate prototype features to make rapid adjustments in value proposition.

Define scaling plan identifying technology, operational, and human resource needs.

Build and implement in design, engineering and strategy sprints.

DELIVERABLES

Current business model canvas

Customer journey map

Challenges + opportunities map

Pipeline reprioritization

Redefined value propositions

Solution canvases for ROI

Physical/digital MVP prototypes

Pilot testing plan

Pilot results and learnings

Market scaling

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propelland is a global strategy, design, and engineering firm helping companies transform and grow.

we are here to help you navigate ambiguity and reframe challenges into opportunities.

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