

SIEMENS

Smart Product & Process Design

Where today meets tomorrow.

Juan Carlos Casis
CP&R Industry Leader



**“What will matter most in the years ahead:
speed and adaptability”**

The Crisis in Consumer Goods

Performance analysis of **34 of the world's top 50** consumer goods companies shows that **85%** of those big companies had seen a **decline** in either revenues, profits or both. Only 15% managed to escape unscathed.

- **Lower growth** in previously booming developing-market economies
- For every large acquisition, there was a large consumer goods company **selling or carving out** a big part of its business
- Many product categories have gone through unprecedented levels of **disruption**
- The **pressure and expectations** from the market have intensified

BAIN & COMPANY 



“What will matter most in the years ahead: speed and adaptability”

Trends

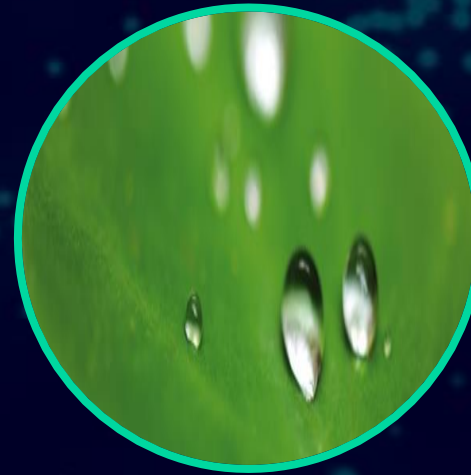
Consumer Products & Retail



Empowered
Consumers



Personal &
Connected
Experiences



Sustainability &
Responsibility



Population Growth
& Rising middle-
class in ASIA

Digital Transformations in the CP&R Industry

Challenges

Globalization and Personalization

Developing Markets will continue to grow, driving a strong need for localized product variants and consumers are looking for products that are tailored for them.

Sustainability

Respecting environmental limits is now considered a requirement of doing business. Proactive and purpose driven companies are winning.

Innovation

Consumers are demanding experiences vs. products. Everything is getting connected. Sustainability requires new materials. The internet enables small nimble companies to win.

Consumer Products & Retail Industry Solutions

Integrated Lifecycle Management



Smart Product & Process Design



Production Design & Optimization



Flexible Manufacturing

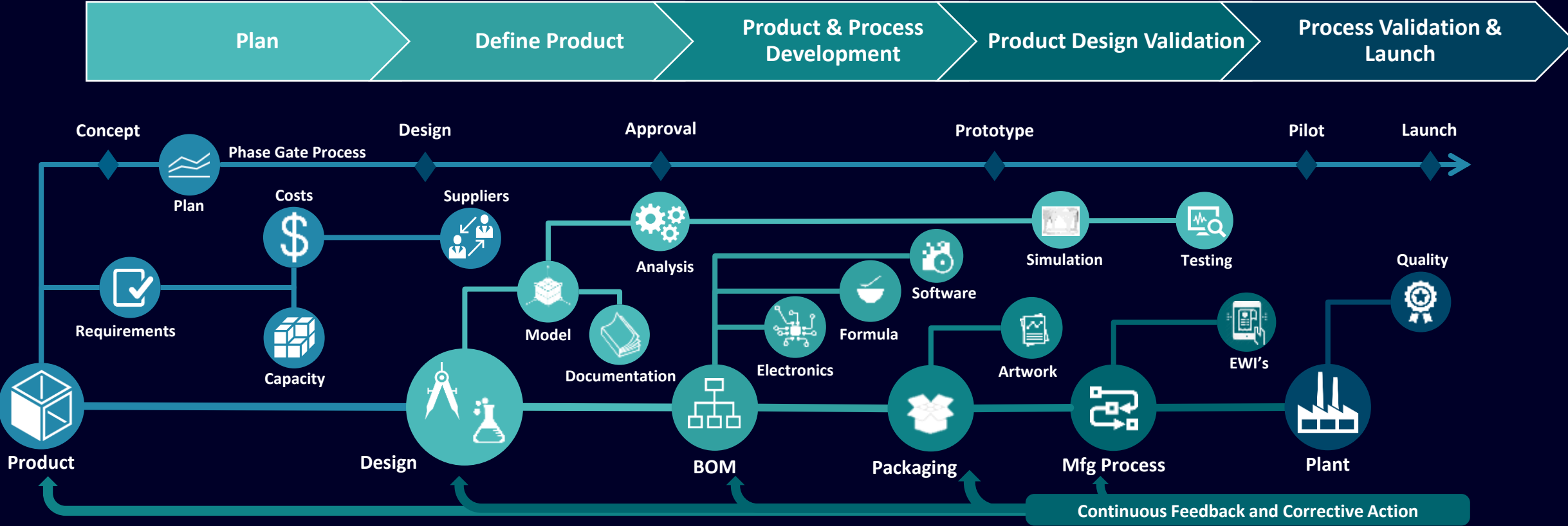


Traceability & Lifecycle Intelligence



An Integrated approach

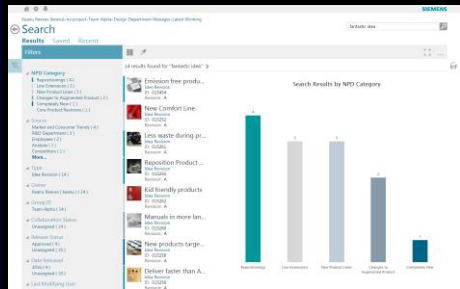
Smart Product & Process Design



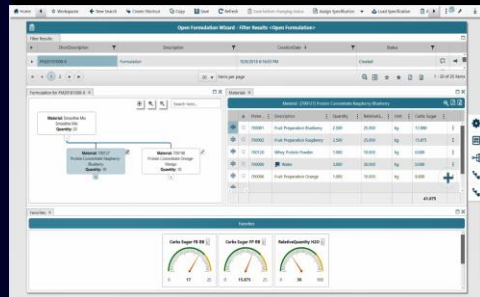
Product Development and Innovation in CPG Industry

Five Foundational Pillars

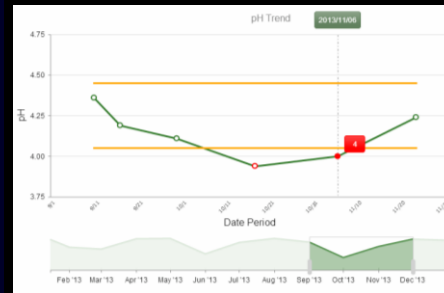
Integrated Program & Lifecycle Management



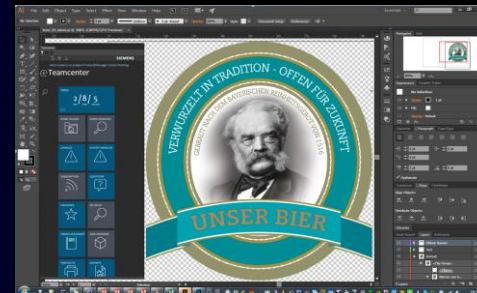
Formulated Product Design



Laboratory Information Management



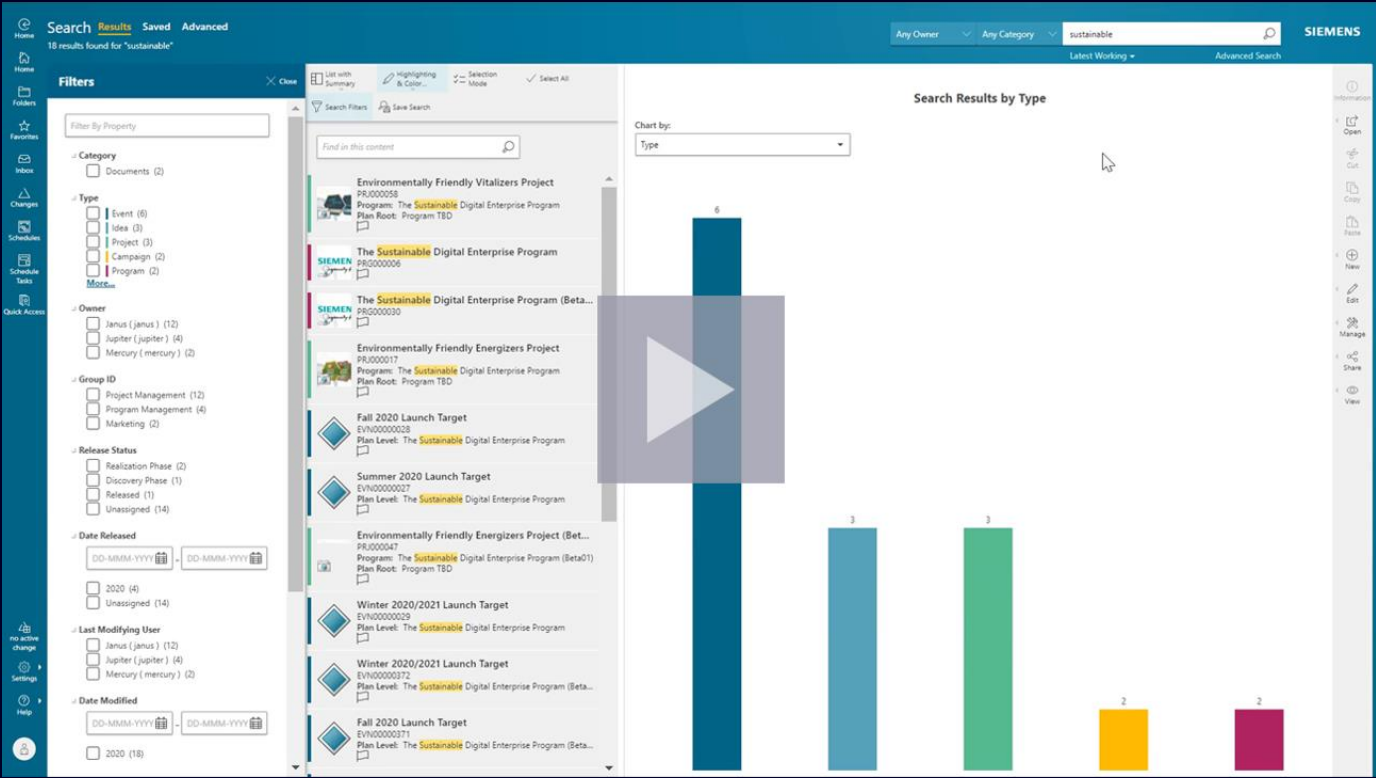
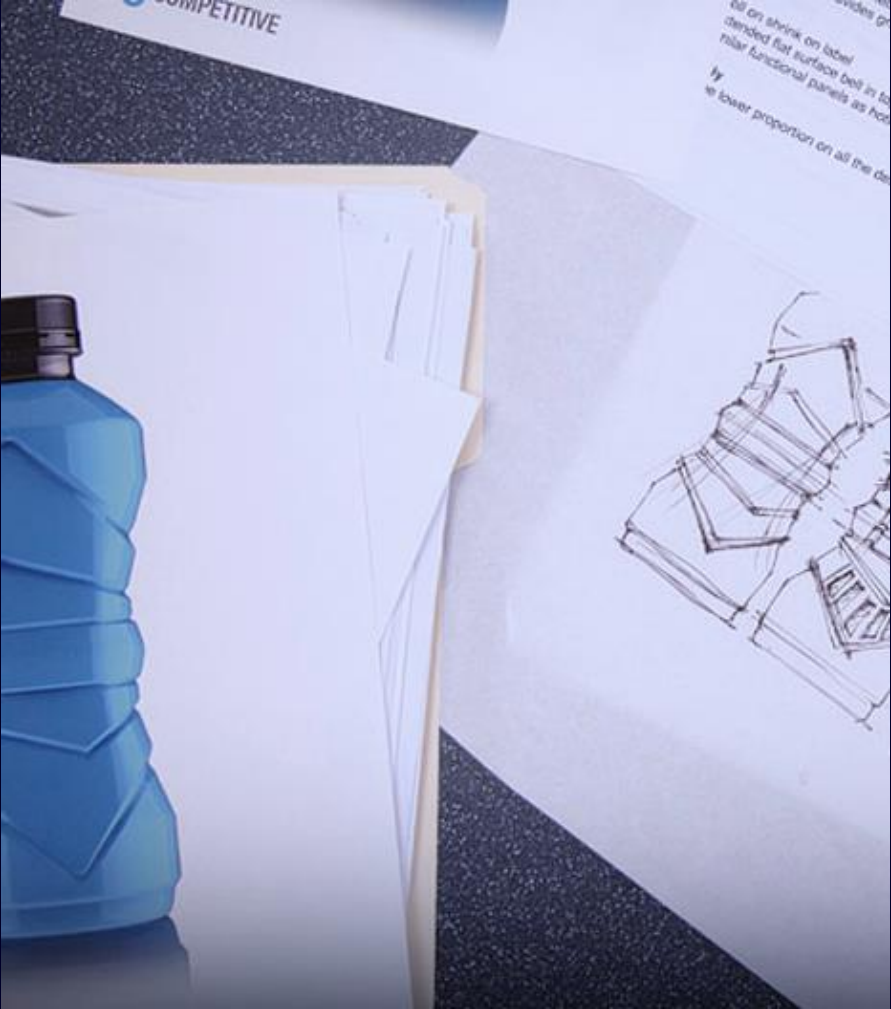
Artwork Development



Package Design and Process Simulation



Program Lifecycle Management



Formulated Product Design

Specification



Experiment



Formula



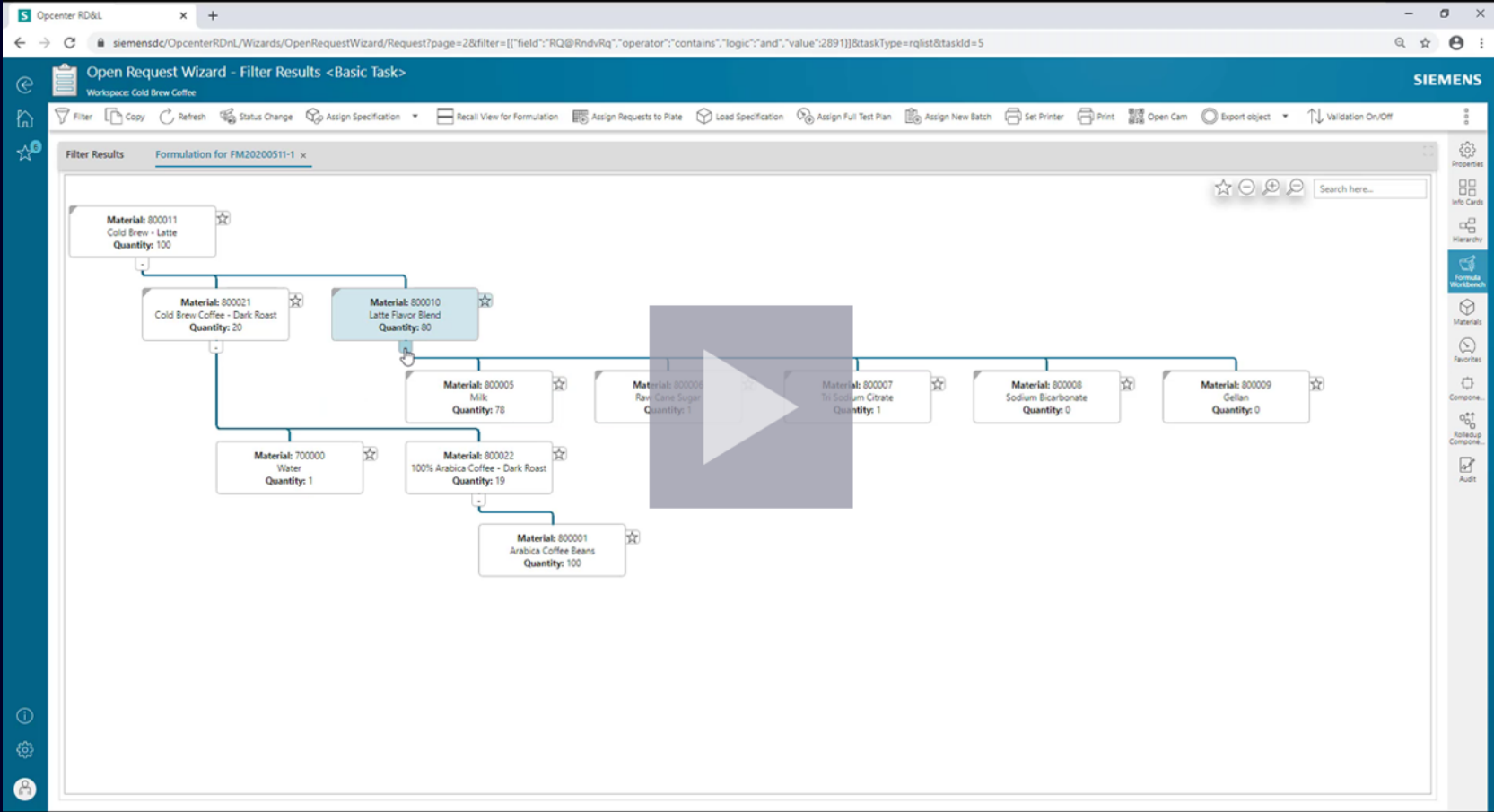

Label Contents



Supplier



Lab Tests



Laboratory Management Components

Registration



Sample Testing




Integration



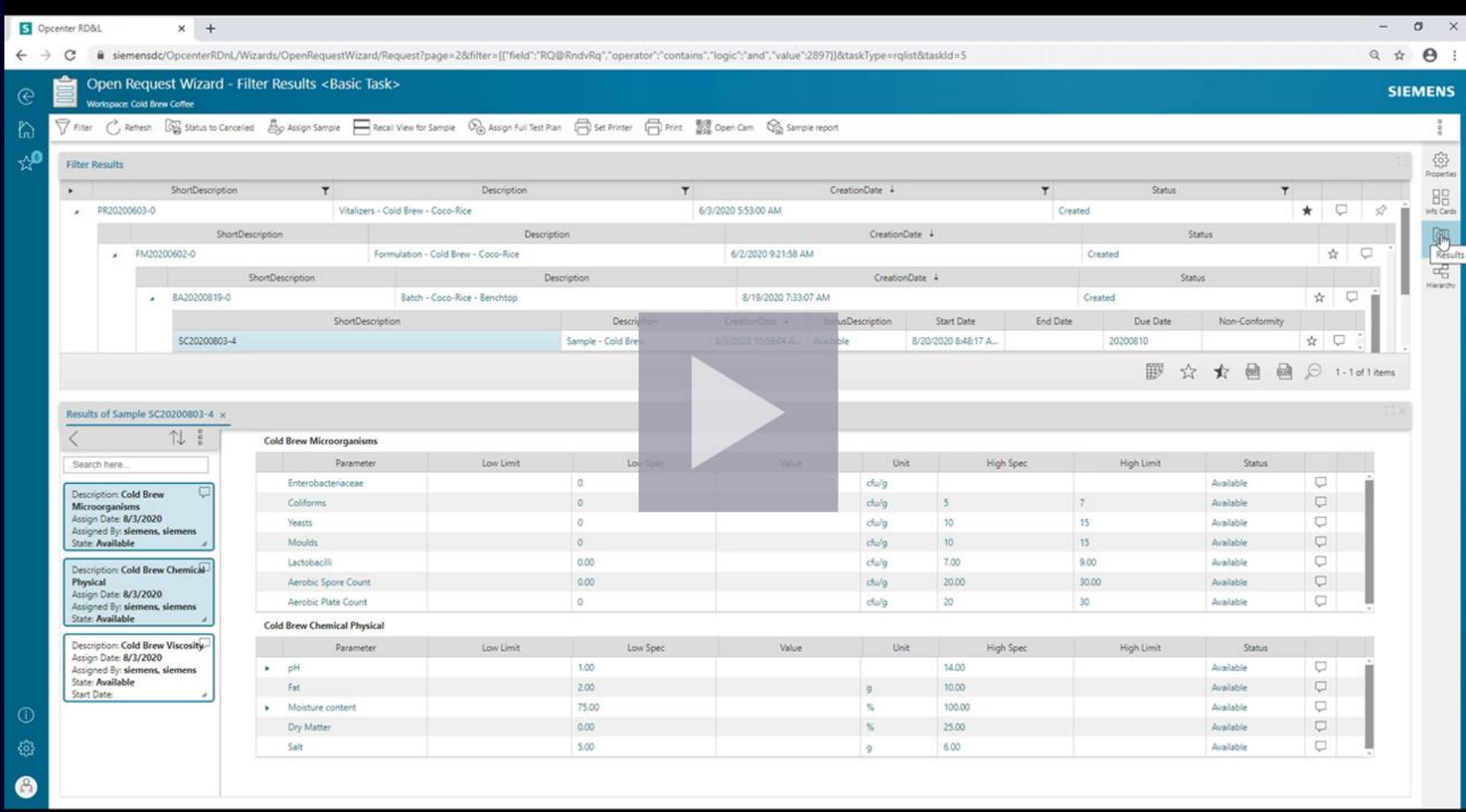
Evaluation



Validation



Certification

The screenshot displays the 'Open Request Wizard - Filter Results <Basic Task>' interface. The main area shows a table of filter results with columns for ShortDescription, Description, CreationDate, and Status. Below this, the 'Results of Sample SC20200803-4' are shown, including two tables: 'Cold Brew Microorganisms' and 'Cold Brew Chemical Physical'.

Parameter	Low Limit	Low Spec	Value	Unit	High Spec	High Limit	Status
Enterobacteriaceae	0			cfu/g			Available
Coliforms	0			cfu/g	5	7	Available
Yeasts	0			cfu/g	10	15	Available
Moulds	0			cfu/g	10	15	Available
Lactobacilli	0.00			cfu/g	7.00	9.00	Available
Aerobic Spore Count	0.00			cfu/g	20.00	30.00	Available
Aerobic Plate Count	0			cfu/g	20	30	Available


Parameter	Low Limit	Low Spec	Value	Unit	High Spec	High Limit	Status
pH	1.00				14.00		Available
Fat	2.00			g	10.00		Available
Moisture content	75.00			%	100.00		Available
Dry Matter	0.00			%	25.00		Available
Salt	5.00			g	6.00		Available

Artwork Development


Concept Development



Artwork



Package



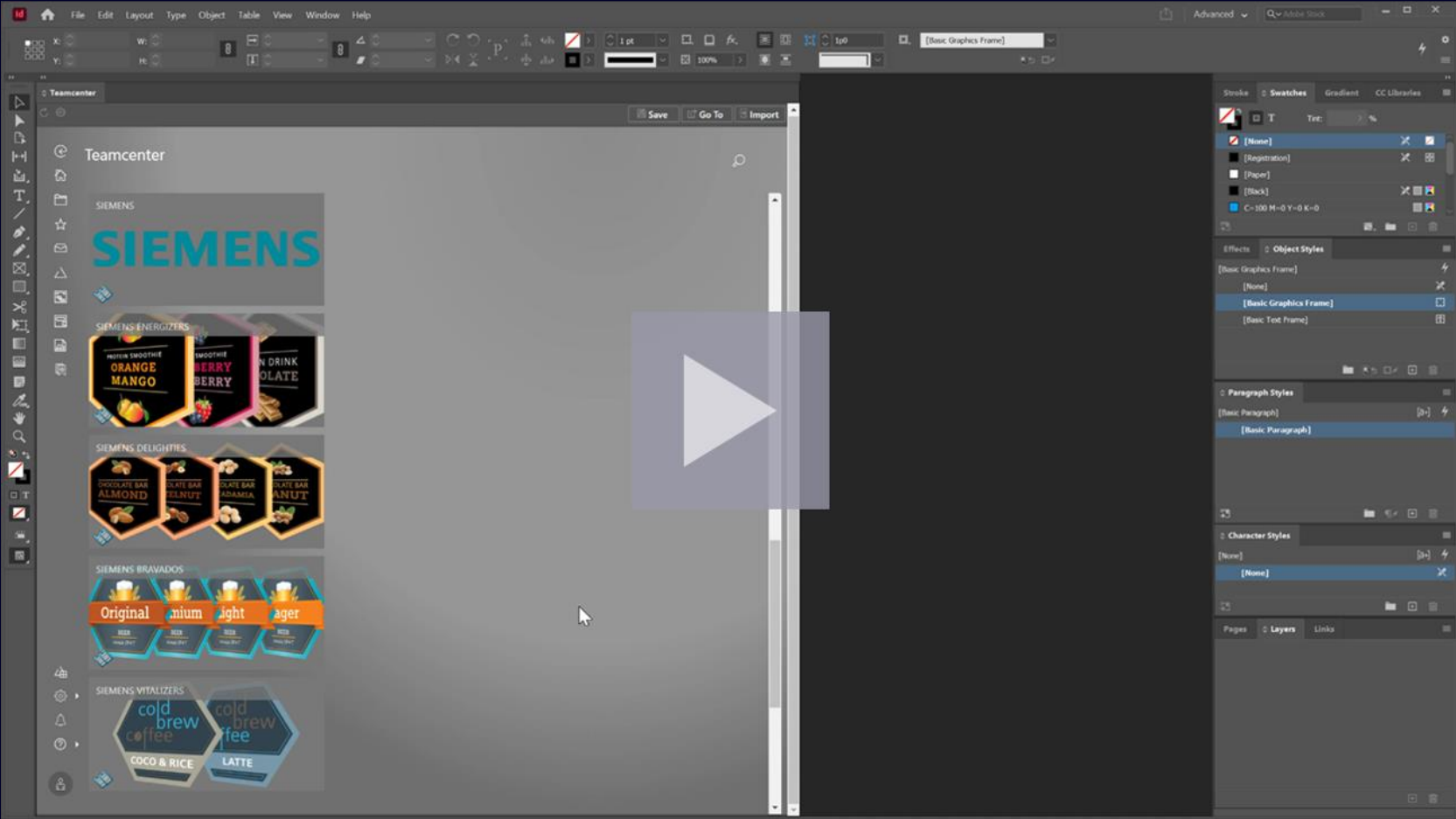

Label Contents



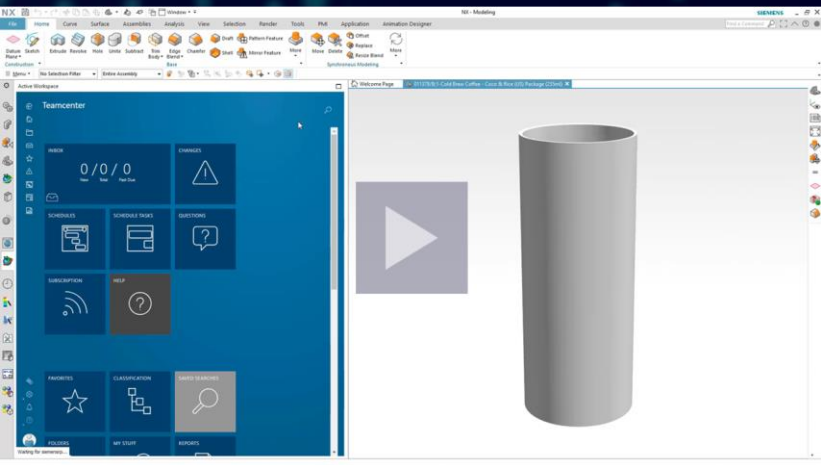
Product Validation



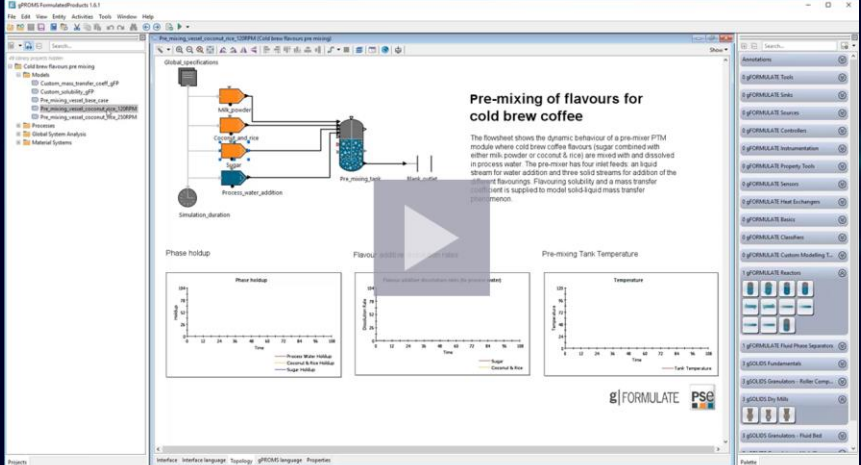
Virtual Shelf



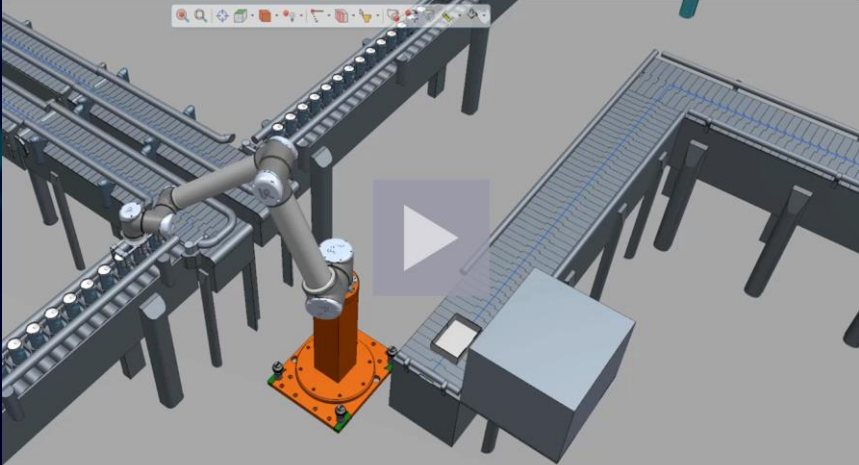
Package Design and Process Simulation



Product



Process



Production

Consumer Products & Retail Industry Solutions

Integrated Lifecycle Management



Smart Product & Process Design



Production Design & Optimization



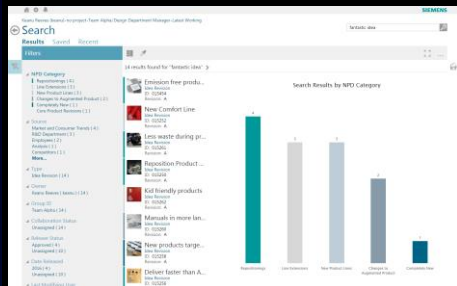
Flexible Manufacturing



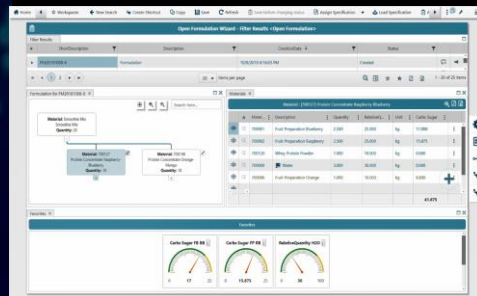
Traceability & Lifecycle Intelligence



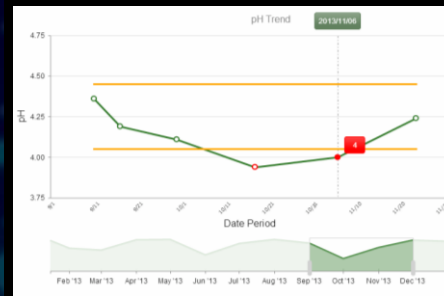
Integrated Program & Lifecycle Management



Formulated Product Design



Lab Information Management



Artwork Development



Package Design and Process Simulation



REAL VALUE FOR YOUR BUSINESS

**meet the demand
of personalized
experiences;
anywhere, all the
time?**



Smart Product & Process Design Value Creation

15-35%

Faster to Market

30%

Engineering Time
Reduction thanks to
Knowledge Transfer

50%

Processing Time
Reduction via greater
Operational Efficiency

\$ Millions

Savings Getting
full scale behavior right
first time for a new
product

Customer References



Eliminate redundancies

Manage **formulation and specifications**

Single point of truth

100% traceability of products / production

Real-time monitoring and control with **zero manual interaction**



12% increase in productivity

30% savings in tank filling time

20% reduction in planning time

60% reduction in production time per order

Increase fill rate from 97.8% to 98.5%

16 hours savings per week in sequencing



20% Increase in Operational Efficiency

Optimization of supply logistics based on the current consumption and stock

Full integration between MES, LIMS & ERP

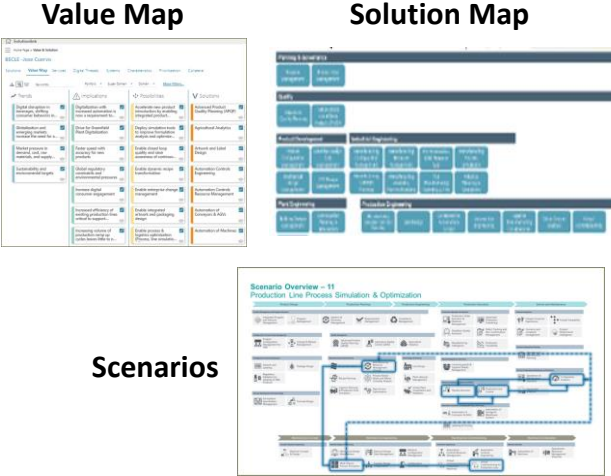
Automatic notifications and reports

Tasting procedure time **reduced by 40%**

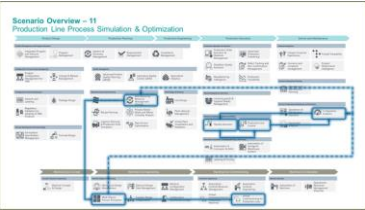


Call to Action – Business Initiatives Assessment

Priority Scoping workshop



Scenarios



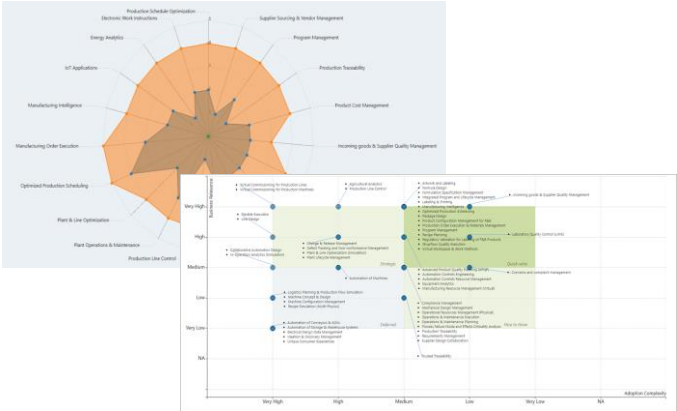
Transformation Roadmap (Priority Definition)



Business Relevance / Roadmap Phase



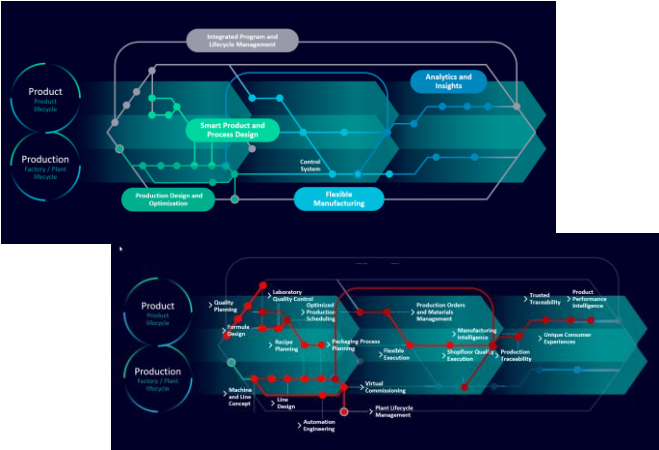
Maturity assessment (Benchmark)



Digital transformation (Initiatives Map)



Digital Thread Prioritization



Let's talk about digitalization...



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