



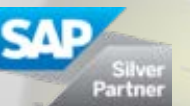
New Innovations in the Chemical Industry

Enterprise Product Development

SAP Chemical Executive Advisory Council  *September 19, 2023*



Over 20 Years of Innovation in Chemicals

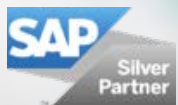




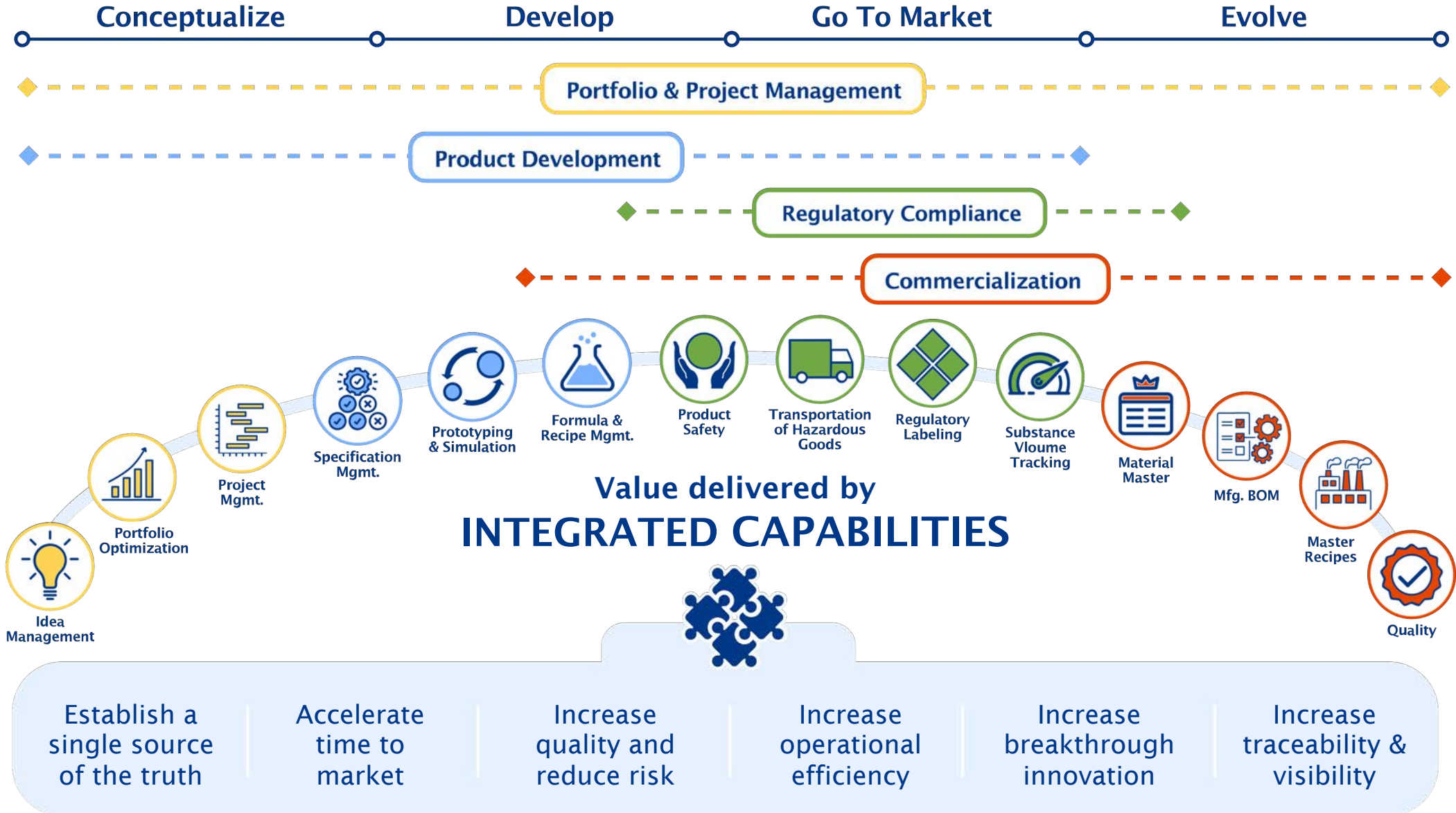
Since 2000, we've been helping companies be more of what they aspire to be with SAP—innovative, sustainable, productive, and profitable.

Solutions for:

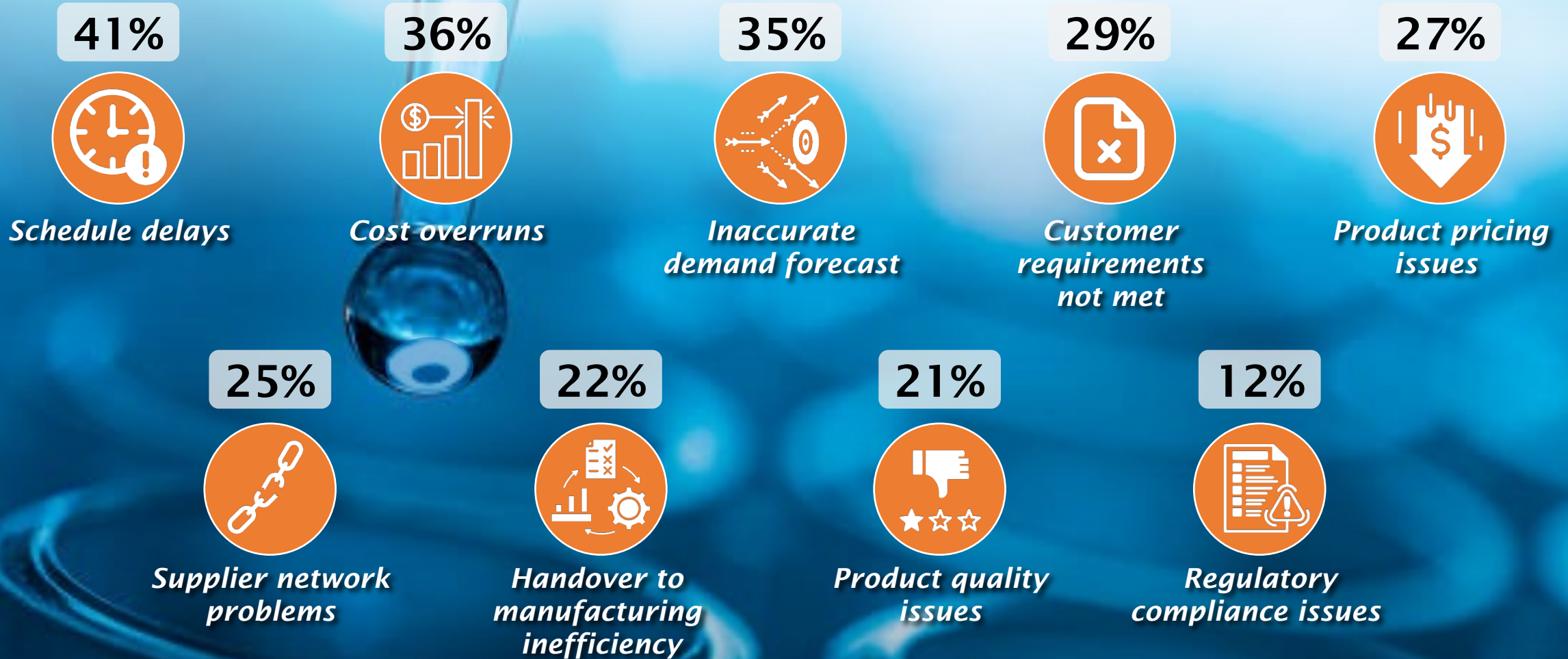
- **Product Lifecycle Management**
- **Environment, Health & Safety**
- **Sustainability**
- **Enterprise UX & Emerging Tech**



INTEGRATING PEOPLE, PROCESSES & DATA ACROSS THE ENTERPRISE



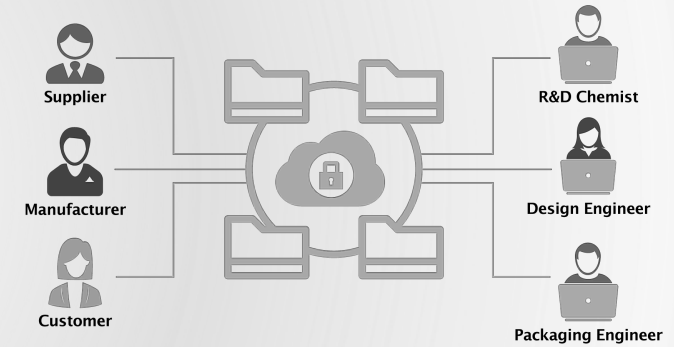
IS PRODUCT DEVELOPMENT LEAKING PROFITABILITY?



STAKEHOLDERS IN THE COLLABORATION PROCESS



“*Collaboration in the chemical industry is a balance between IP protection and unleashing product innovation.*”



Supplier

- Sales/Marketing
- R&D
- Production
- Procurement
- Logistics
- Quality
- Regulatory
- Management
- Legal

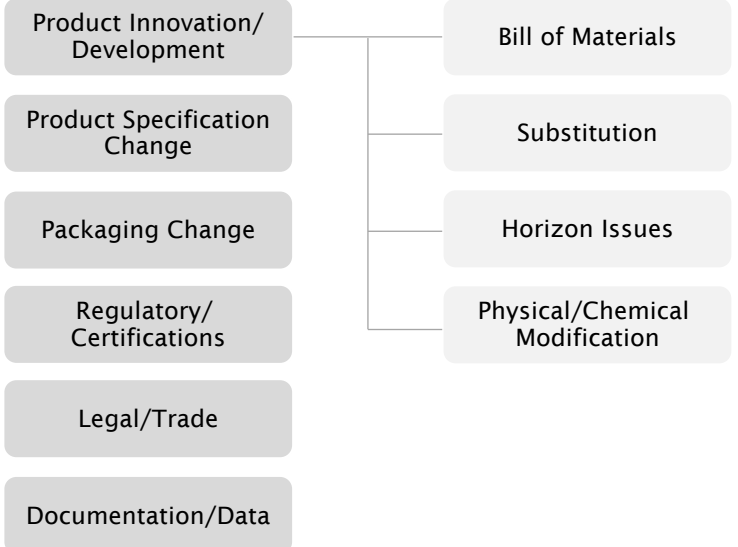
Customer

- Sales/Marketing
- R&D
- Production
- Procurement
- Logistics
- Quality
- Regulatory
- Management
- Legal

End User

- Sales/Marketing
- R&D
- Procurement
- Quality
- Regulatory
- Legal

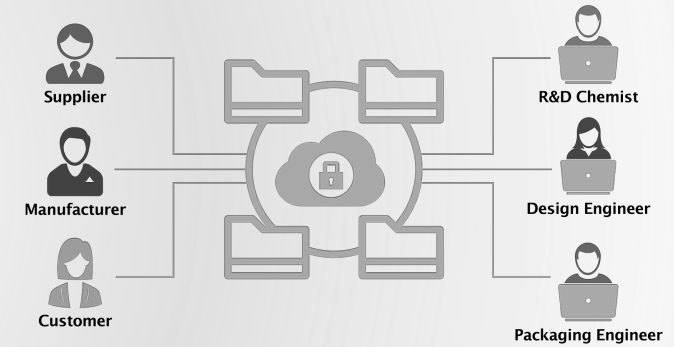
Collaboration Topics



TYPES OF INFORMATION TRANSFERRED



“*Collaboration in the chemical industry is a balance between IP protection and unleashing product innovation.*”



Non-CBI-Managed Information

- Publications
- Patents
- Registrations -Gov/Non-Gov
- Trade Literature (e.g., Prod Literature, SDS, Labels)

CBI-Managed Information

- Legal Agreements/NDAs
- Product Sampling
- Application Testing
- Health & Safety Testing
- Supplier Site(s) Auditing
- Quality Review
- Due Diligence Assessment
- Legal Review
- Logistic Review
- Transaction Structure Assessment
- Product Data
- Product & Application Study Reports
- Final Product Specification
- Final Product Composition
- Final Packaging Specifications
- Final Product Labeling
- Final Bill of Materials
- Final Product Recipes
- Initial Business & Production Plan



Manufacturing CIOs face issues when supporting digitalization initiatives based on siloed application landscapes and broken processes. Application modernization and integration are indispensable, but need a fundamentally new approach.

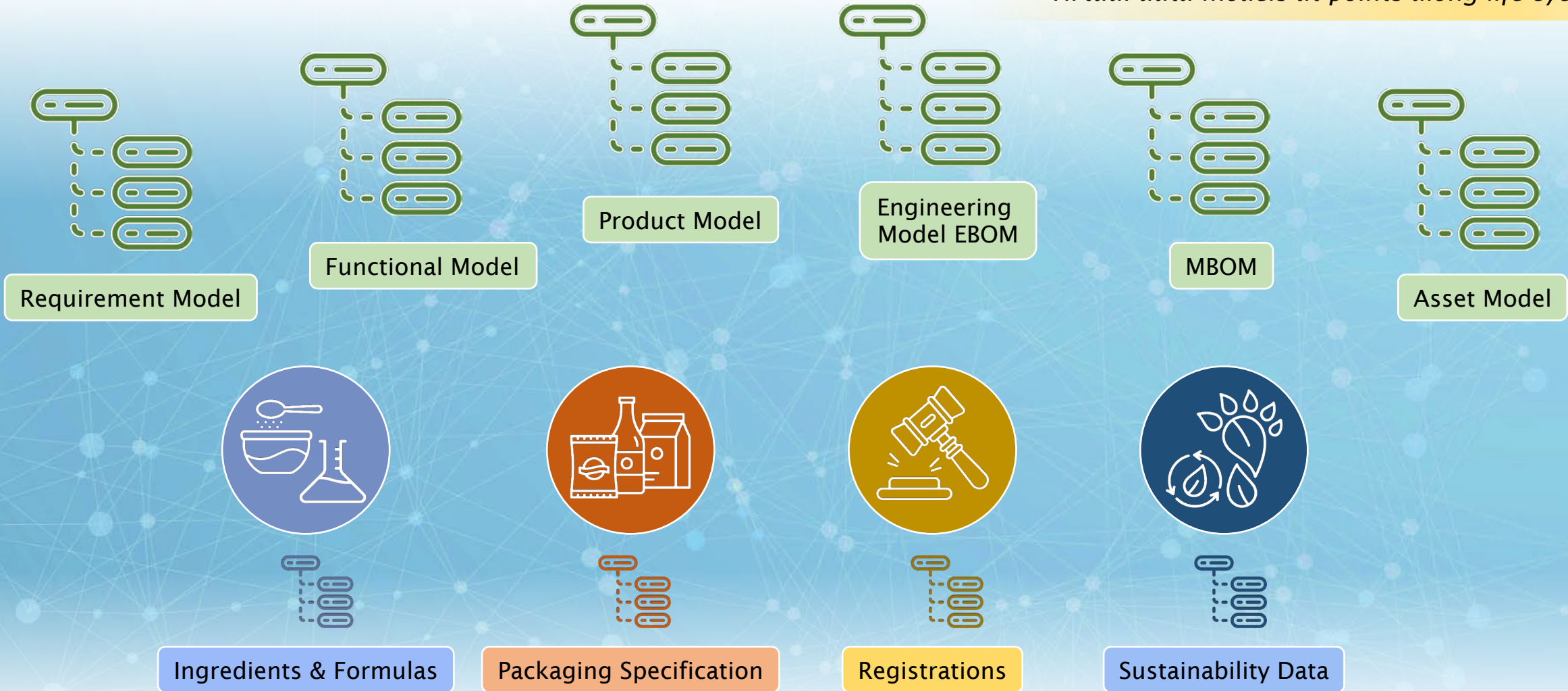
Successful Manufacturing Digitalization Requires Application Modernization and Integration

Gartner, November 2020

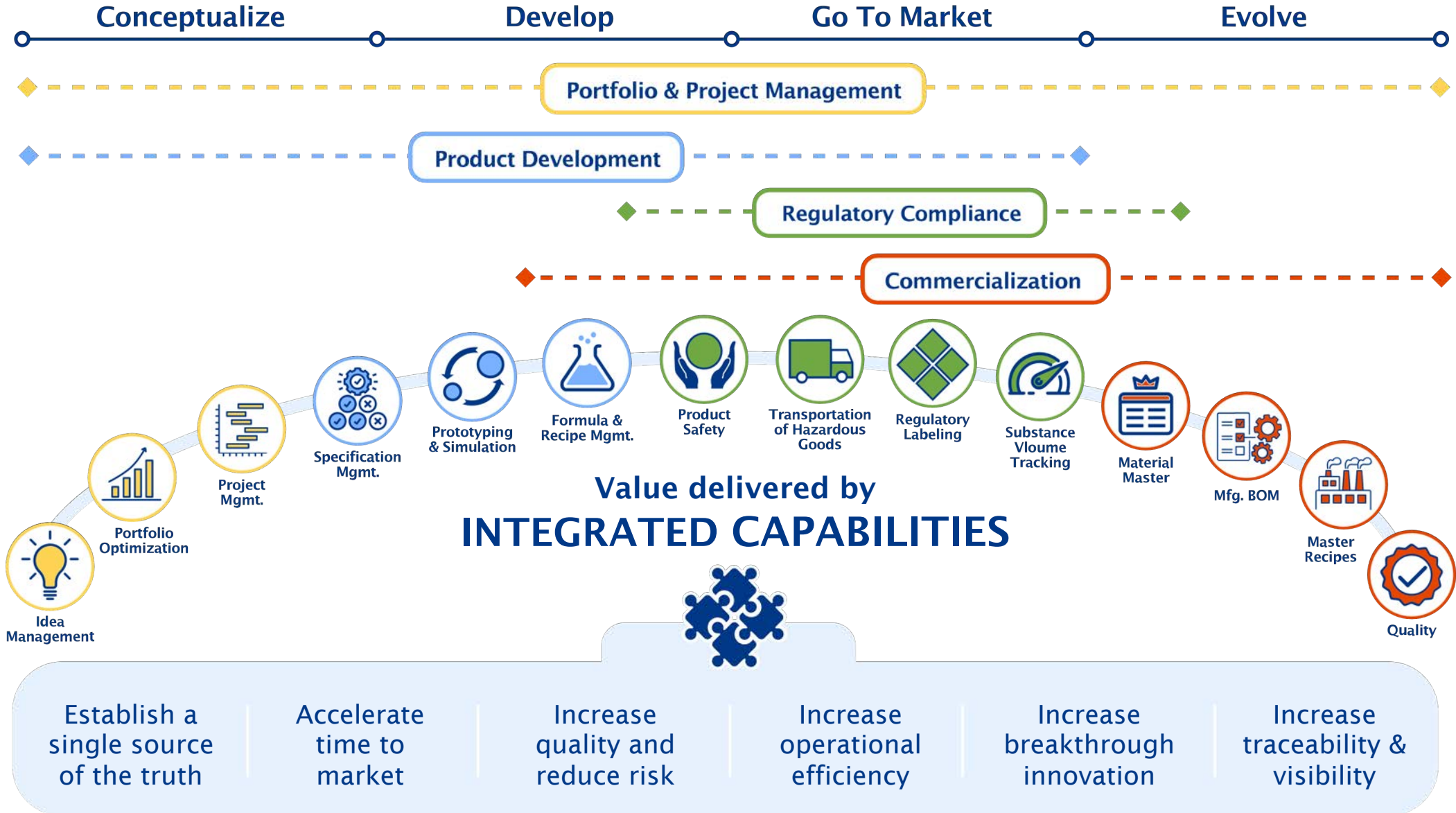
TWINS AND MODELS AND THREADS



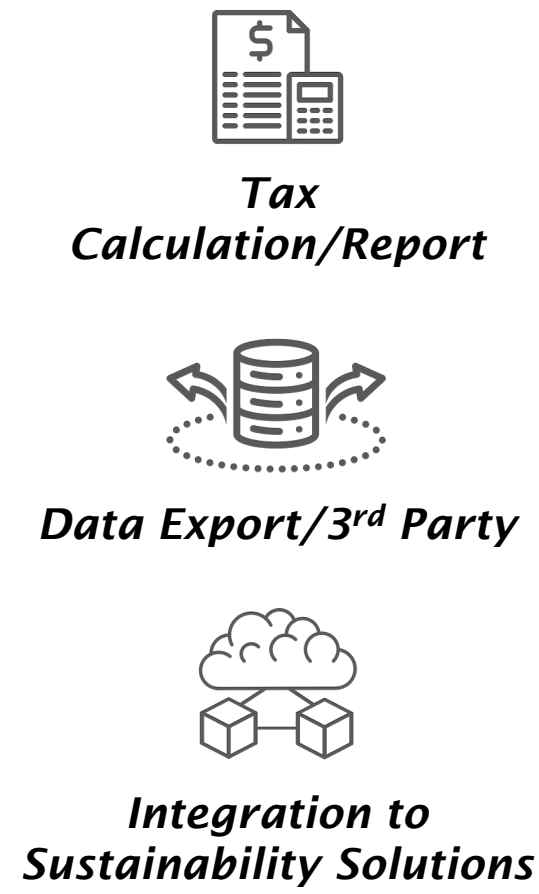
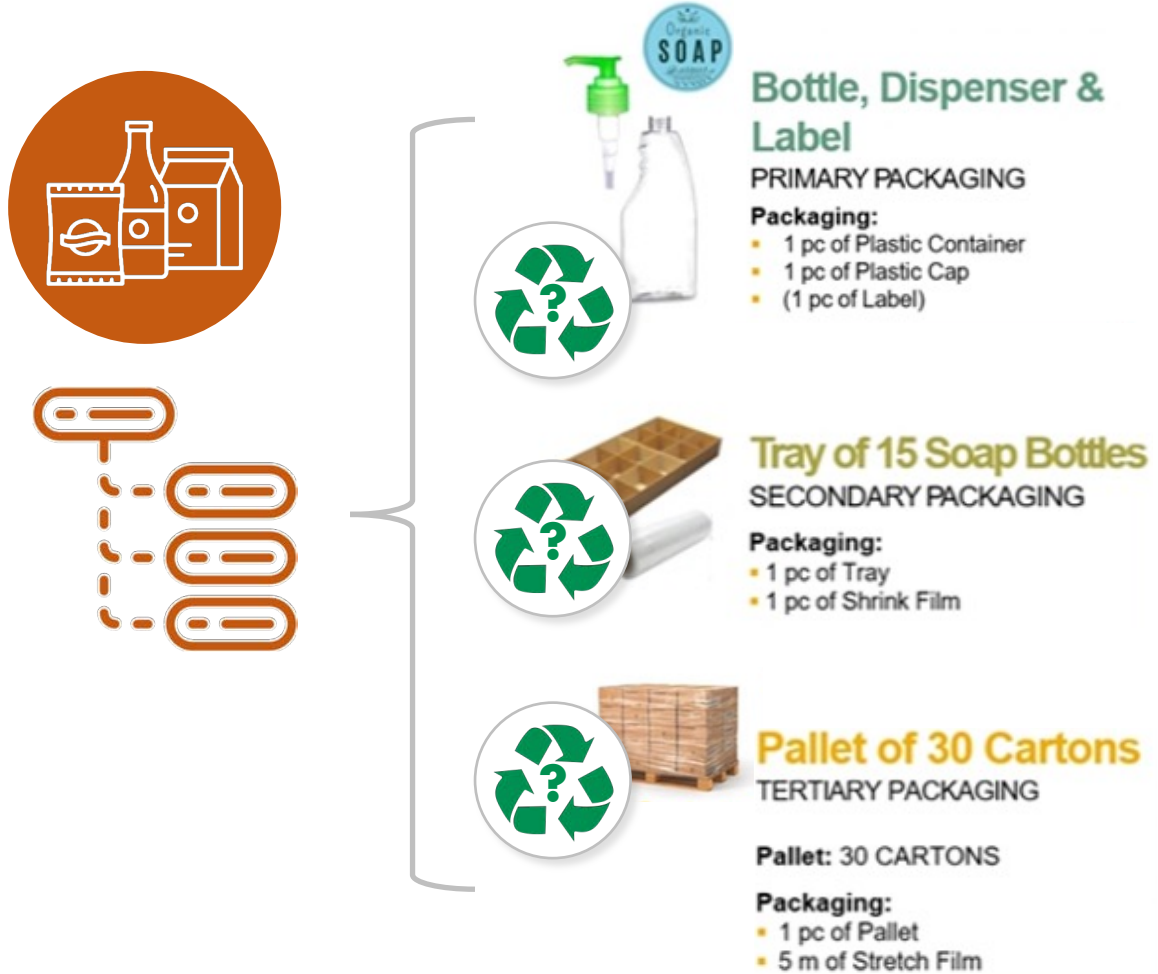
Digital thread/sustainability thread connects virtual data models at points along life cycle



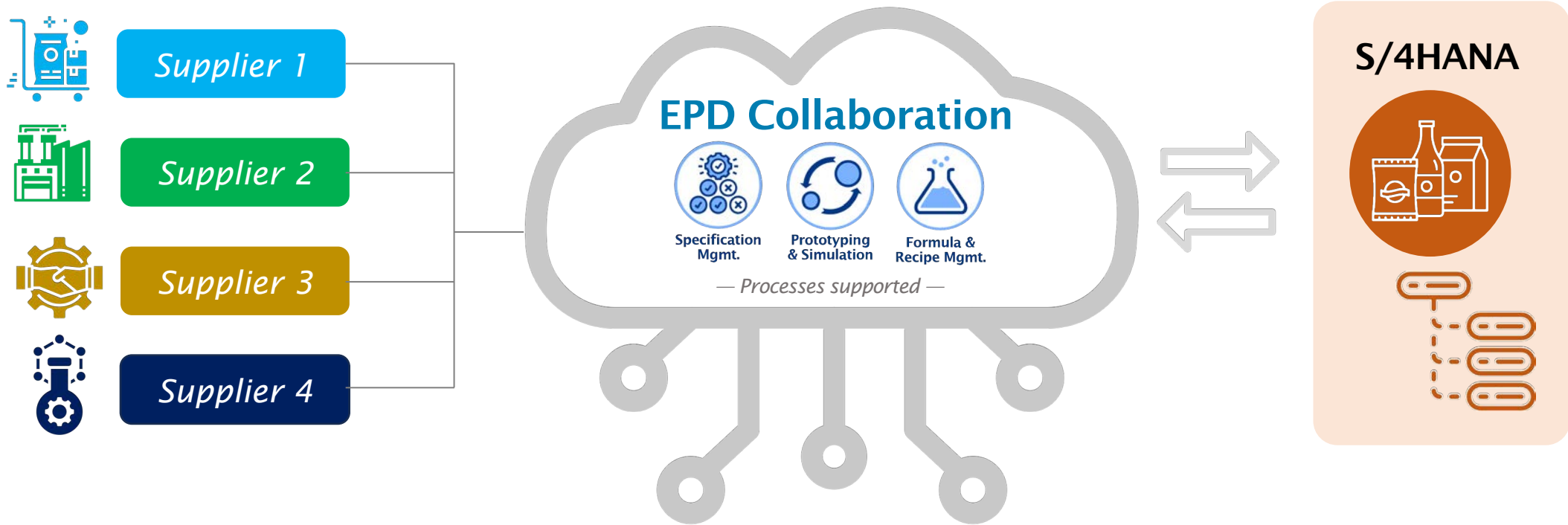
INTEGRATED PLATFORM TO ENABLE THE DIGITAL TWIN & THREAD



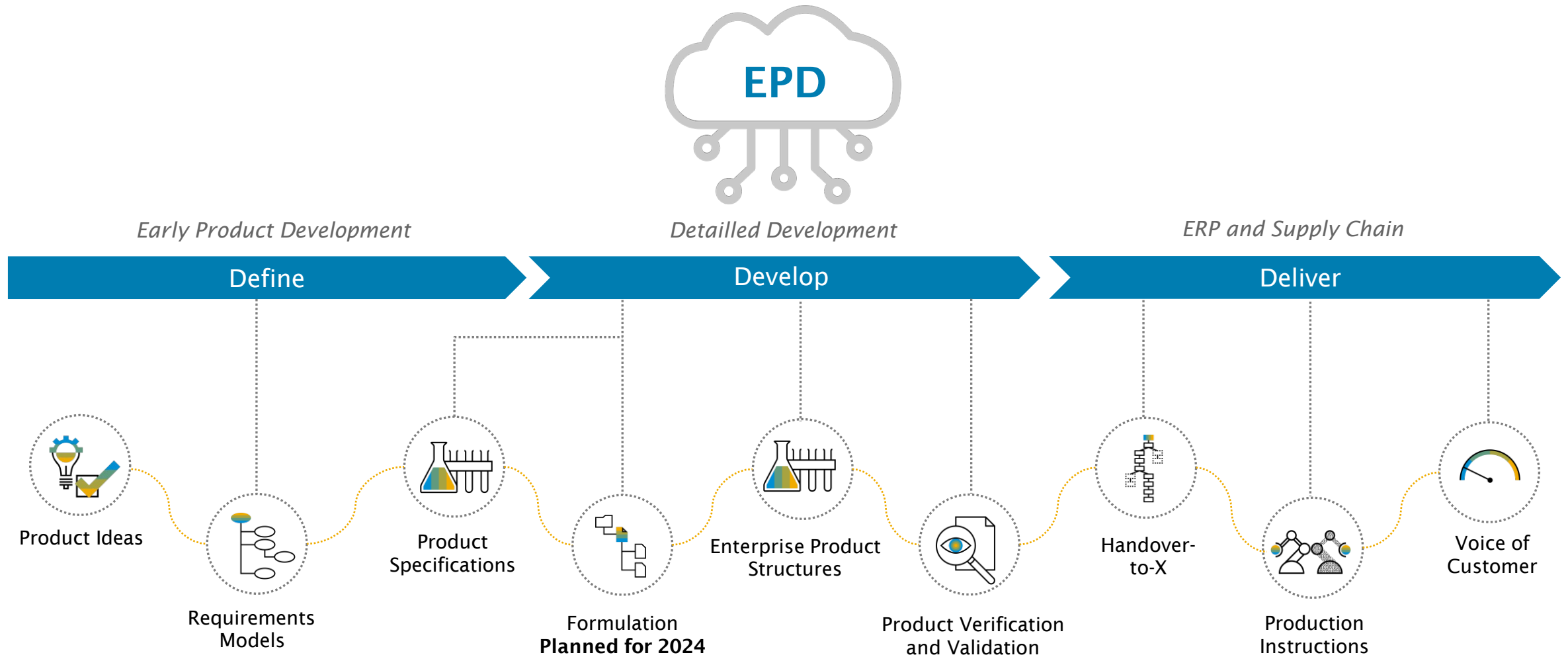
UK PLASTIC PACKAGING TAX



PRODUCT SPECIFICATION COLLABORATION

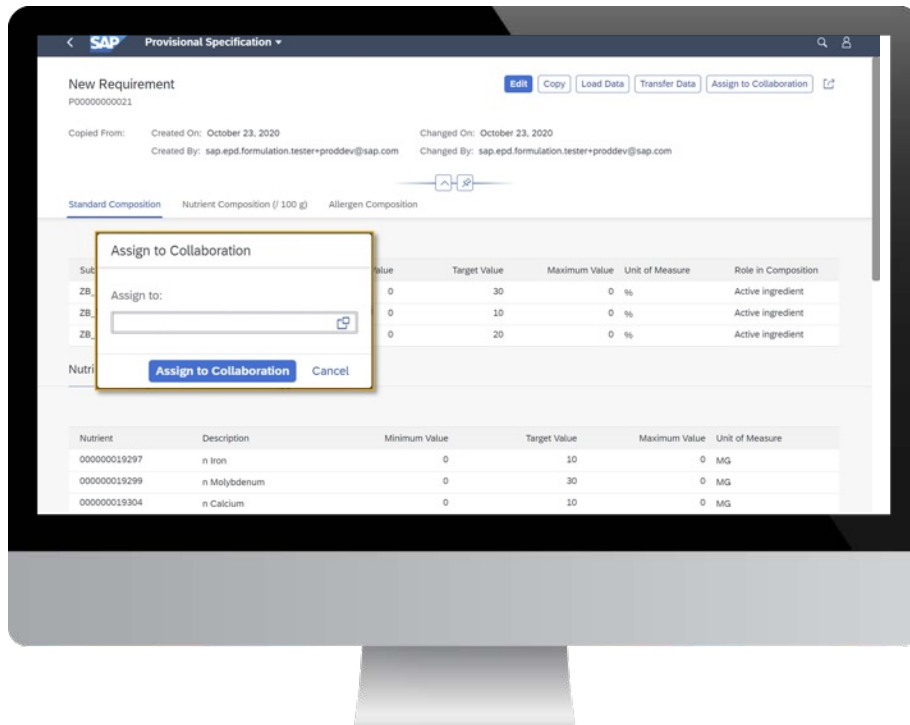


IDEA-TO-MARKET WITH SAP ENTERPRISE PRODUCT DEVELOPMENT





Collaboration with structured product data – specification



- Collaborate on **specifications** with external stakeholders
- Setup of **specification structure** for the collaboration and load lists like nutrients, substances, allergens value to enable the maintenance
- Reduced manual work and collaboration cycle times & increased quality of collaboration with **structured objects for process industries**
- Share specifications from S/4 on premise



Global Personal Care & Cosmetics Company



Americas
EMEA
APAC

INDUSTRY:
*Consumer Products
Cosmetics*

BUSINESS CHALLENGE

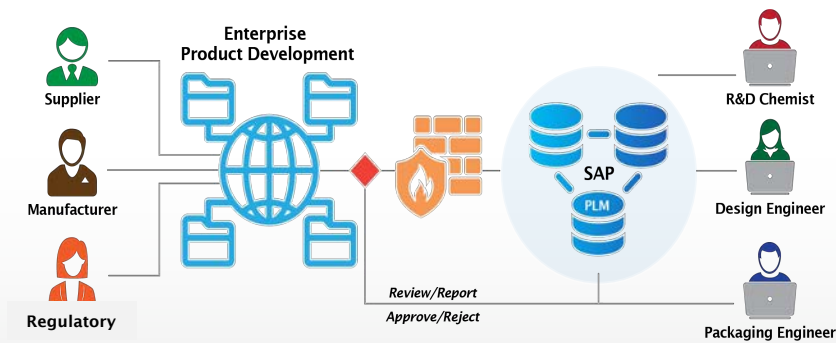
A global beauty company faced critical challenges due to disparate R&D systems across global regions—minimal integration between PLM, ERP, and supporting systems; performance & scalability restraints; costly maintenance; and inflexibility amid dynamic sustainability pressures. The mounting risk, both from a quality and regulatory perspective, demanded a full transformation strategy to unite product data and R&D processes.

SOLUTION

Linx-AS architected a platform for sustainable product development. Using industry best practices, Linx-AS standardized the data model and streamlined business processes, creating a single version of the truth for product data across categories.

TECHNOLOGY

SAP Recipe Development, Labeling, Packaging/Artwork integration, Enterprise Product Development (collaboration)



Solution design and delivery included EPD collaboration with third-party manufacturers and packaging suppliers.

SPECIFICATION STATUS NETWORK



The screenshot displays the SAP Specification Status Network interface. At the top, it shows the user 'Nico Bonthuys' and the specification '09926800016'. Below this, there are navigation tabs for 'General Data', 'Properties', 'Basic Data', 'Identifiers', 'Header Status', 'Material Assignments', 'Relationships', 'WWI Reports', and 'Documents'. The 'Header Status' tab is active, showing a status flow diagram with buttons for W050 (Preliminary), W100 (Operational), W160 (Routing For Approval), W200 (Released), W210 (Change in Progress), W220 (Change Approval), W230 (Pending MC Change), W300 (Phase Out), W888 (Obsolete), and W999 (Cancelled). Below the flow diagram, the 'Current Status' section shows 'Status: W050 - Preliminary' and 'Scheme: ZZ_IC Individual Component Status Scheme'. The 'Next Possible Status' section shows 'Status: W100 - Operational' with an 'Assign Selected Status' button. The 'Status History' section includes an 'Export' button and a table with columns for Source Status, Target Status, Date, Time, User, User Name, and Long Text.

Source Status	Target Status	Date	Time	User	User Name	Long Text
	W050 - Preliminary	05/23/2023	00:44:18	JKAMARUDDIN	Kamaruddin, Julia	

- Publish specifications and documents to EPD
- Action triggered by the status network or manually

SPECIFICATIONS AND DOCUMENTS IN EPD



SAP My Collaborations

Search in: Apps

(PACKAGING) PCP1 (PCP1)

Status: Approved Components Created On: Aug 2, 2023 Repository Type: Default
Document Expiry: 100 Days Created By: Nico Bonthuys Display Language: EN
Description: EPD Walkthrough Example for (PACKAGING)

Shared Documents Comments (0) Participants (3) History

Upload to Visualization Email Notification

(PACKAGING) / Packaging Components / 099268000016 - FOCA SH Base 0671 60ml IEPSKAN

Nico2 Items (3)

Type	Name	Modified On	Created By	Modified By	Size	Document Info Record
<input type="checkbox"/>	TM-58017749 - Clogging Test of a Non-Aerosol Hairspray.PDF	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	51 KB	***
<input type="checkbox"/>	TM-58030358 - Pressure Sensitive Tape Test - Printed M.PDF	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	106 KB	***
<input type="checkbox"/>	099268000016 - FOCA SH Base 0671 60ml IEPSKAN.pdf	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	320 KB	***

MANUAL: PICK SPECIFICATION AND DOCUMENTS FROM PRODUCT MONITOR



SAP Nico Bonthuys Application: Product Monitor

Filters

Recipe ID: 099350180117/000/000

Specification: []

Material: []

Document Type: []

TPM/Supplier collaboration []

Product Monitor [x]

Active Recipe in Spec [x]

All Recipes []

GO

Product Monitor

Export [v] Expand All [v] Download Files [] Settings []

Recipe/Specification	Description	Type	Type Description	Status Desc.	Authoriz. Group	Material	Doc Number	Doc. version	Document Description	Document Type	Doc.Type Description	Doc. Status Desc	EPD Relevant	
<input checked="" type="checkbox"/>	099350180117	WP PRO ELM RG OTC COND SPRAY 150ml 18AUS	ZZIFG	Individual Finished Good	Preliminary	ALL	150000000736	00	Professional Example	800	Artwork	Active	<input type="checkbox"/>	
<input type="checkbox"/>							150000000775	00	099350180117_WP PRO ELM RG OTC COND SPRA	Z06	IFG Short Rpt	Active	<input type="checkbox"/>	
<input type="checkbox"/>	099350180117/000/000	WR KOL KIT N RG PCOLCRM 7-64 19TK	ZZIFG	Ind. Finished Good Plant Recipe	Preliminary	ALL							<input type="checkbox"/>	
<input type="checkbox"/>	315000000094	FS102 Test Spec	ZFORMULA	Formula Product Specification	Experimental	ZHAIR	150000000774	00	315000000094_FS102 Test Spec_Z02_00101	Z02	FRM Perf Rpt	Active	<input type="checkbox"/>	
<input type="checkbox"/>	315000000094/014/000	AM FS102 Standard Recipe Test	PLANT	Plant-Dependent Recipe	Experimental								<input type="checkbox"/>	
<input type="checkbox"/>	230000000034	AM FS16/FS32 Test Substance 1 Long Text Identifier; 23-42-7	ZRAWMAT	Raw Material Specification	Change in Progress	ALL	103	150000000024	00	Analytical Specification	105	Analytical Report	Active	<input type="checkbox"/>
<input type="checkbox"/>							150000000776	00	230000000034_AM FS16FS32 Test Substance	Z03	SPC Perf Rpt	Active	<input type="checkbox"/>	
<input type="checkbox"/>	230000000035	AM BB Ingredient 5; 23-23-4	ZRAWMAT	Raw Material Specification	Change in Progress	ALL	106	150000000777	00	230000000035_AM BB Ingredient_5_Z03_0010	Z03	SPC Perf Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	230000000037	AM FS23 Raw Material 2; 30-94-4	ZRAWMAT	Raw Material Specification	Experimental	ALL		150000000778	00	230000000037_AM FS23 Raw Material2_Z03	Z03	SPC Perf Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000090926831	FS235_JK_TUAS KLSTN PCOLCRM 50ml TR	ZZIC_TUBE	IC - Tube	Change in Progress	ALL	90926831	150000000736	00	Wella Professional Example	800	Artwork	Active	<input type="checkbox"/>
<input type="checkbox"/>								150000000773	00	000090926831_TUAS KLSTN PCOLCRM 50ML TR	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000099477201	TBMK KLSTN NTRLS PCOLCRM 7-64 1EA TR	ZZIC_TUBE	IC - Tube	Preliminary	ALL		150000000736	00	Professional Example	800	Artwork	Active	<input type="checkbox"/>
<input type="checkbox"/>								150000000772	00	000099477201_TBMK KLSTN NTRLS PCOLCRM	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098768665	FS216_IC_GALLERIA DEV BO 50ML MULTI XE	ZZIC_CTR	IC - Container	Change in Progress	ALL		151000000001	00	Exmple Technical Drawing	805	Artwork Tech Drawing	Active	<input type="checkbox"/>
<input type="checkbox"/>								150000000771	00	000098768665_FS216_IC_GALLERIA DEV BO	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098743421	CL MULTI XE 19.8MM LNRLESS WHITE	ZZIC_CLSCO	IC - Closure and Collar	Preliminary	ALL		150000000736	00	Professional Example	800	Artwork	Active	<input type="checkbox"/>
<input type="checkbox"/>								151000000003	00	E_175x875_tellbox_Die line	805	Artwork Tech Drawing	Active	<input type="checkbox"/>
<input type="checkbox"/>								151000000004	00	Technical Drawing A12345	805	Artwork Tech Drawing	Active	<input type="checkbox"/>
<input type="checkbox"/>								150000000770	00	000098743421_CL MULTI XE 19.8MM LNRLESS	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000095516105	LBF KLSTN ACT 50ML TR NAT	ZZIC_LABEL	IC - Label	Preliminary	ALL		151000000002	01	test	805	Artwork Tech Drawing	Active	<input type="checkbox"/>
<input type="checkbox"/>								150000000769	00	000095516105_LBF KLSTN ACT 50ML TR NAT	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	099268000031	FS214 -CARTON PC	ZZIC_CARTO	IC - Cartonboard	Preliminary	ALL		150000000768	00	099268000031_FS214 -CARTON PC_Z08_00101	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098554375	GLSL MULTI 2IT XX COPOLYMER BLUE SL	ZZIC_FLEX	IC - Flexible	Preliminary	ALL		150000000767	00	000098554375_GLSL MULTI 2IT XX COPOLYMER	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098814502	LBOS MULTI 1IT XX 70 x 74 mm	ZZIC_LABEL	IC - Label	Released	ALL		TM-14	00	test	855	Test Method	Preliminary	<input type="checkbox"/>
<input type="checkbox"/>	000098552173	LBOS MULTI 1IT XX 80 x 120 mm	ZZIC_LABEL	IC - Label	Preliminary	ALL		150000000765	00	000098552173_LBOS MULTI 1IT XX 80 x 120	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000099970251	SHPO MULT 24IT XX MAXI CLOSED NEW UN	ZZIC_CORRU	IC - Corrugated	Preliminary	ALL		150000000764	00	000099970251_SHPO MULT 24IT XX MAXI CLOS	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098580370	TAPE MULTI 1METER XX	ZZIC_FLEX	IC - Flexible	Preliminary	ALL	98580370	150000000763	00	000098580370_TAPE MULTI 1METER XX_Z08_00	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000099970399	FIBP MULTI XX 3IT NEW UN 230 MM PP1	ZZIC_FLEX	IC - Flexible	Preliminary	ALL		150000000762	00	000099970399_FIBP MULTI XX 3IT NEW UN 23	Z08	IC Short Rpt	Active	<input type="checkbox"/>
<input type="checkbox"/>	000098822997	SM MULTI 1M XX STRETCH FILM	ZZIC_TEROT	IC - Tertiary and Other	Preliminary	ALL	98822997	150000000761	00	000098822997_SM MULTI 1M XX STRETCH FILM	Z08	IC Short Rpt	Active	<input type="checkbox"/>

PICK THE COLLABORATION IN EPD



SAP My Collaborations

Search in: Apps

Suppliers

Name: Type: Status: Created On: Created By: Changed On: Changed By:

Go Hide Filter Bar Clear Filters

My Collaborations Nico View 2 All Favorites Create Delete Copy Info Settings

Type	Collaboration Name	Description	Status	Created By	Created On	Changed By	Changed On	Key1
PCP1	(PACKAGING)	EPD Walkthrough Example for	Approved Components	Nico Bonthuys	Aug 2, 2023	Nico Bonthuys	Aug 2, 2023	
PCP2	EWALD PACKAGING	TPM Collaboration Example	Approved Products	Nico Bonthuys	Aug 1, 2023	Nico Bonthuys	Aug 1, 2023	
PCP1	Packaging Component Template	Template to manually copy the document...	Approved Components	Nico Bonthuys	Aug 1, 2023	Nico Bonthuys	Aug 2, 2023	
PCP2	TPM Collaboration Template	Template to copy the new TPM folder str...	Approved Products	Nico Bonthuys	Aug 1, 2023	Nico Bonthuys	Aug 1, 2023	

CREATE FOLDER STRUCTURE AND DOCUMENTS



SAP My Collaborations

Search in: Apps

PCP1 (PCP1)

Status: Approved Components Created On: Aug 2, 2023 Repository Type: Default
Document Expiry: 100 Days Created By: Nico Bonthuys Display Language: EN
Description: EPD Walkthrough Example for (PCP1) PACKAGING

Shared Documents Comments (0) Participants (3) History

Upload to Visualization Email Notification

Nico2 Items (11)

Type	Name	Modified On	Created By	Modified By	Size	Document Info Record
<input type="checkbox"/>	099268012354 - FOCA RTCHUP PCOL 6.5A CA	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012370 - FOCA RTCHUP PCOL 5A US PR	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012400 - FOCA KLSTN PCOLCRM 5-4 60ML GR IL SINGLE	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012061 - FOCA KLSTN PCOLCRM 307-17 1KT AP	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012327 - FOCA CLRNATLIN NPCOL 7RG DARROSGOLEBLO NA	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012386 - FOCA RTCHUP PCOL 10 US PR	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012425 - FOCA KLSTN PCOLCRM 8-1 60ML GR IL SINGLE	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012444 - FOCA KLSTNPCOLCRM 77-44 60ML GRILSINGLE	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012519 - FOCA COL CHARM PERM CRM SILVER LILAC NA	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268012892 - FOCA KLST PERMCLR KIT 7_77 MEA	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>
<input type="checkbox"/>	099268000016 - FOCA SH Base 0671 60ml IEPSKAN	Aug 2, 2023	nbonthuys@linxas.com	nbonthuys@linxas.com	...	>

WORKFLOW AND INBOX



SAP Change Record

New Ingredient MG Test

1000429

General Information Items Attachments Classifications **Process Routes**

Add Task View Details Edit Delete Show Background Tasks NO Templates Log

Process Tasks	Type	Activity	Note	Status	Latest End Date	Procg. Tim...	Priority	Processor	Processed ...	Decision
Header										
R and D Level 3	Position	Complete entries in Change Record	View	Completed				Gebhart, Mark	03/08/2023, 13:11:00 EST	Approve
PDC Level 3	Position	Create Specification/ Create DIR	View	Completed						
SQA Level 3	Position	Obtain Supplier Documentation	View	Completed						
PDC Level 3	Position	Complete Specification/ Complete DIR	View	Completed						
Parallel Steps										
Regulatory Level 3	Position	Review Regulatory Doc. Create Report	View	Cancelled						

SAP My Inbox

All Tasks (100)

Search

PLM Workflow

AFV - Admin mode

1000731

[i](#) [0](#) [0](#) [0](#)

Basic Data

Record Type: Artwork and Finished Goods New Version (AFV)
Change Record: 1000731
Change Record Description: AFV - Admin mode
Record Status: Packaging Graph Coord (PKG)-65 (65)
Change Responsible: -
Expected Completion Date: -
Detail Description: -

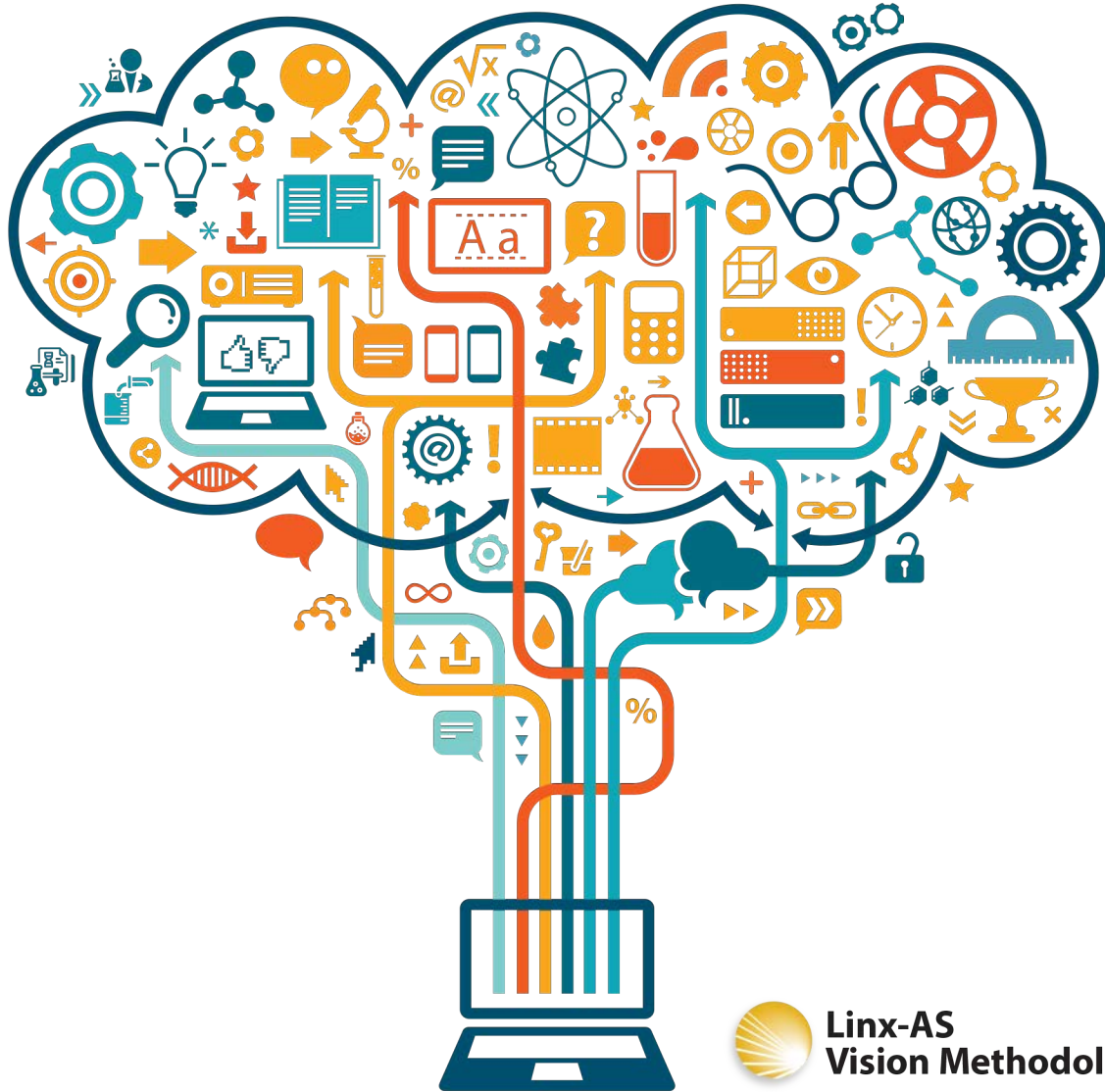
Approve Reject Show Log Claim Forward Suspend

LINX-AS VISION METHODOLOGY: STRATEGY CONSULTING

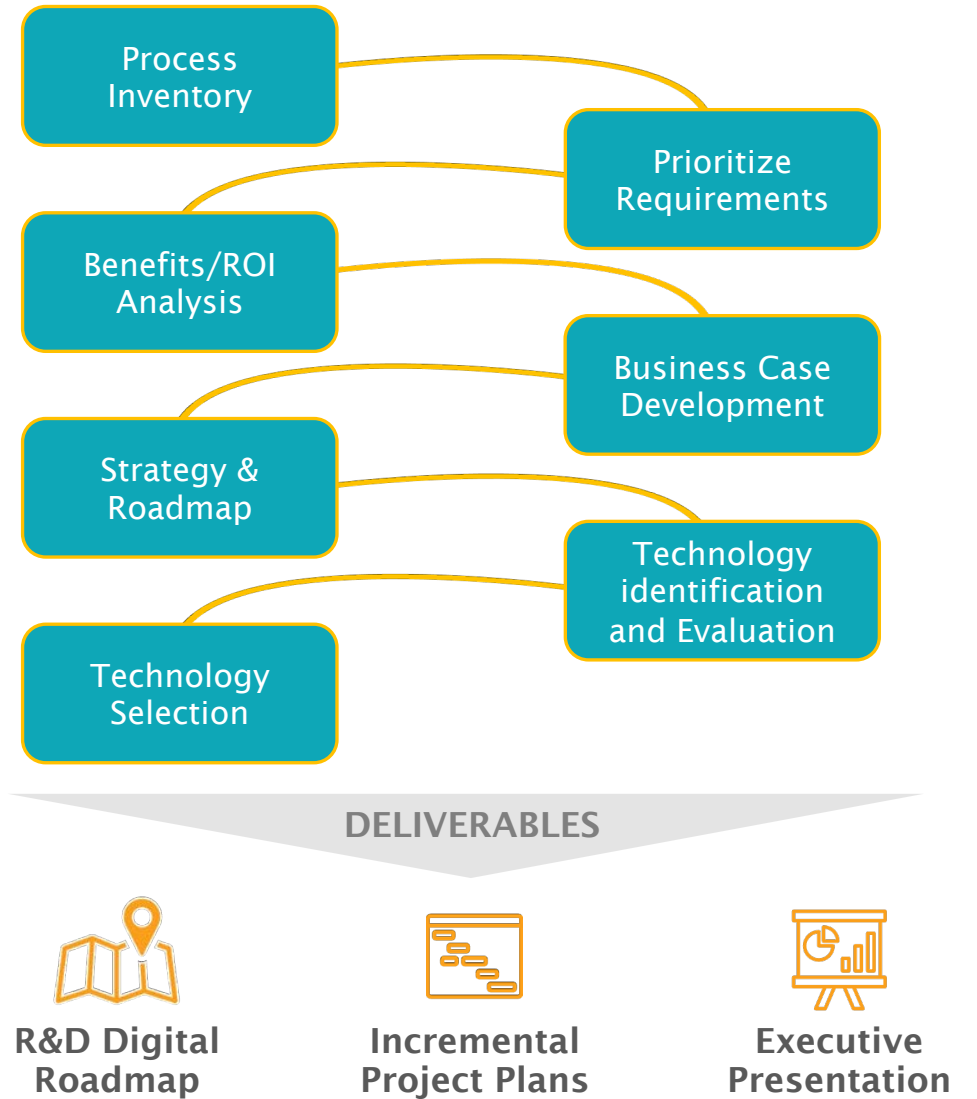


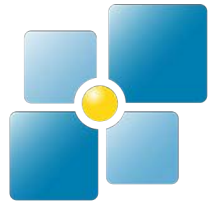
- Accelerated roadmapping process for PLM and Sustainability
- Driven by customer pain points but focused on long-term success and ROI
- Engaging stakeholder workshops to evaluate solutions and refine requirements
- Concrete deliverables for executing strategy and building business case

LINX-AS VISION METHODOLOGY: STRATEGY CONSULTING



 **Linx-AS
Vision Methodology™**





Linx-as™



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