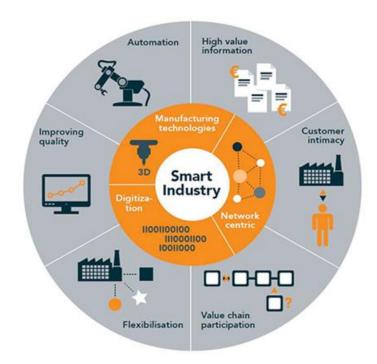




SMART INDUSTRY

The Smart Industry Actieagenda is an initiative by:

- FME
-) TNO
- Ministry of Economic Affairs
- VNO-NCW
- Chamber of Commerce
- Nederland ICT





FIELDLAB

- Practical environment, physical and digital space for experimentation
- Radical innovation goal
- Duration of at least 3 years
- Several projects with various private and public partners, including financing
- Alignment with other fieldlabs









CURRENT FIELDLABS

Examples:

· Smart Bending Factory

Multi-material 3D printing

Flexible Manufacturing

Smart Dairy Farming 2.0

Ultra Personalised Products and Services

• The Garden: security in smart industry

Smart Connected Supplier Network

• .



Becoming the world's best 'networked' digital factory, where companies collaborate on the development and manufacture of complex high-tech machines.



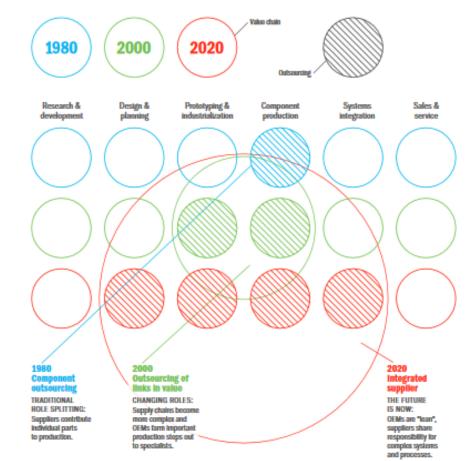
ROLE CHANGE FOR SUPPLIERS





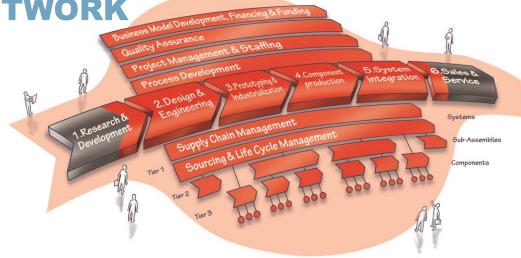






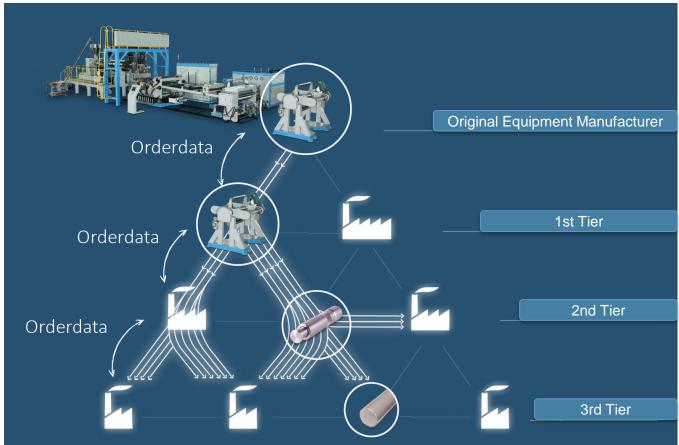


OBJECTIVE FIELDLAB SMART CONNECTED
SUPPLIER NETWORK



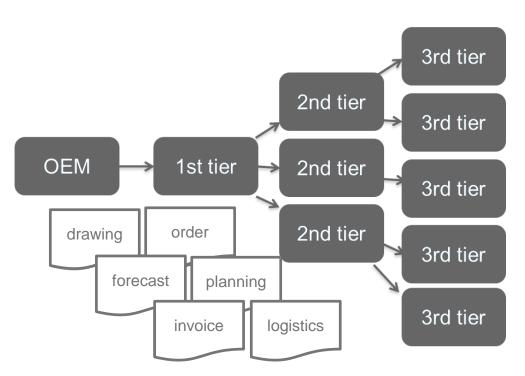
20% higher productivity of the supplier network, through fast, secure and interoperable exchange of information across company borders







DATA IN THE SUPPLY NETWORK



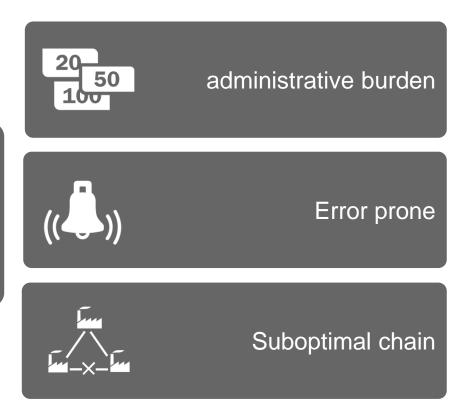
First step: automate flow in ERP



CURRENT SITUATION



Manual input in ERP-system from e-mail or webportal





APPROACH

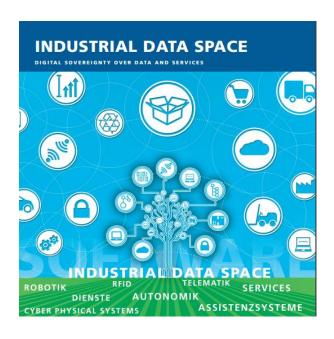


Open Standards and Translators

- Development and implementation of open standards for information sharing based on semantic technology
- Creating universal translators for the exchange of
 - Orders
 - Forecast & planning
 - 3D drawings
 - Invoices
 - Logistics



APPROACH



Developing Secure ICT infrastructures

- Developing new information infrastructures for the security and governance of valuable manufacturing data
- In close collaboration with
 - German Industrial Data Space Association
 - > Fieldlab "the Garden"



ACCESS TO STANDARD











Publicatie

Communit

T4SMM

leheer

Support

Smart Connected Supplier Network

a Brainport Industries initiative



Shared language

SCSN provides shared language models for exchanging supply information between customers and suppliers. This includes orders, forecasts, bill of materials and TPDs.

View the data models



Fieldlab SCSN

SCSN is one of the Smart Indrustry Fieldlabs. For more information about the project, please visit the Smart Indrustry website.

SCSN Fieldlab website



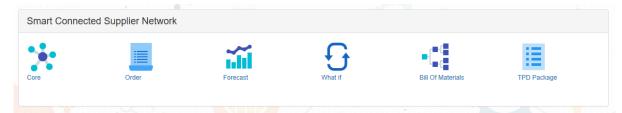
eValidator

With the eValidator you can validate your XML messages against the SCSN data models.

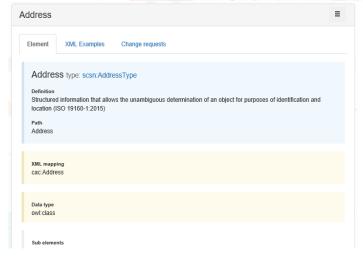
Validate your SCSN messages



MANAGING THE STANDARD



Order message



	5			
Element	XML Examples	Change requests 🔀		
Example 1				
on:ub d:Com a:xsd ce" x p://d ersio 16-10 cbc:N encyC cbc:E ument	l:schema:xsd:0 monAggregateCo: CommonBasicCo :CommonBasicCo el	tionDocumentReference tReference>\n	urn:oasis:names:spec coc="urn:oasis:names: i="http://www.w3.or i:specification:ubl: (xsd/maindoc/UBL-Ord i: based on UBL versi <cbc:id>123</cbc:id> 123WhatIfor coc:ValidityPeri >>Referentie naer of ce>\n <cac:contr< th=""><td>ification:ublisc specification:ub rg/2001/XMLSchema brg/2001/XMLSchema schema:xsd:Order ler-2.1.xsd">\n lon 2.1>\n <ci id="">\n <cbc:id>\n <cbc:issue c="" cbc:ordertypeco<="" td=""></cbc:issue></cbc:id></ci></td></cac:contr<>	ification:ublisc specification:ub rg/2001/XMLSchema brg/2001/XMLSchema schema:xsd:Order ler-2.1.xsd">\n lon 2.1>\n <ci id="">\n <cbc:id>\n <cbc:issue c="" cbc:ordertypeco<="" td=""></cbc:issue></cbc:id></ci>

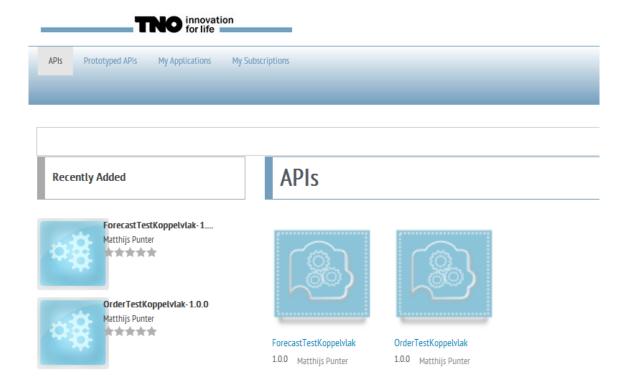


VALIDATING MESSAGES

	330 < cac:AdditionalItemProperty> 331 ccbc:Name>Width 332 ccbc:Name>Width 332 ccbc:Value>Z0mm 333 (cac:AdditionalItemProperty> 334 (/cac:Item) 335 (/cac:Crearing) 336 (/cac:OrderLine> 337 (
Validation result	Validate		
✓ Valid XML syntax			
2. Schema validation			
✓ Complies with XML schema			
B. Business rules			
▲ BR-18: SCSN restrictions on UBL Ord	der		6
▲ BR-2: Either net price or gross price l	has to be stated in the order, but not both.		0
BR-19: Only SCSN Order elements SH	HOULD be implemented.		0



TESTING FACILITY





PROJECT PARTNERS













































NEXT STEPS

- Scale up by including more and more parties
 - OEMs
 - Suppliers
 - Software vendors
- Practical use
 - Process / workflow
 - Business case evaluation
- Governance in place





DEMONSTRATION FACILITY ON BRAINPORT INDUSTRIES CAMPUS





INFORMATION

-) Sharepoint:
 - https://365tno.sharepoint.com/teams/FabriekvdToekomst/SitePages/Home.aspx
 - For documentation
- Standard:
 - https://smartconnected.t4smm.nl/#/
 - Details of the standard
 - Comments and change requests
-) Questions:
 - Peter Laloli
 - > Peter.laloli@tno.nl
 - **+31 6 53725202**



) FABRIEK VAN DE TOEKOMST

Welkom bij Fabriek van de Toekomst,

There I tipled C first C floor History

Digital Manadacturing Porticio

Fieldlab Smart Connected Supplier Network

19 | Schakels in de keten woensdag 20 september 2017



JOIN OUR OPEN INITIATIVE



OEMs, Suppliers and ERP / PLM software companies

Leverage your investments through a proven approach and additional public funding.