E-Supplier

Information for the EDI exchange with Siemens

IT creates business value

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Overview EDI

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Preamble

The Siemens group pursues the global goal to design its order, supply and accounting processes to be of the highest quality, safe, environmentally friendly, economical as well as transparent and strives to increase the mutual benefit of e-commerce between itself and its partners.

Defintion

The term Electronic Data Interchange (EDI) refers to the electronic exchange of structured business data between different data processing systems with the help of defined standards

Types of EDI standards

• Industry standards (e.g. xCBL, Rosettanet)

• Sector dependent standards (e.g. Odette in automobile industry)

• Sector independent standards (e.g. ANSI X12, UN/EDIFACT)

Which EDI standards does Siemens use?

Based on its international presence and cross-sector business fields, Siemens has defined UN/EDIFACT (Siemens EDIFACT standard) as a corporate standard for EDI. In addition Siemens uses SAS (Siemens ANSI Standard) and an XML-Standard (DIN5XML) in the electronic data exchange

Supported message types and business processes

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Message types		Business processes
• Purchase Order	(ORDERS)	• **P2P (Purchase to Pay)**
• Purchase Order Change	(ORDCHG)	
• Order acknowledgement/confirmation	(ORDRSP)	
• Dispatch Advice/Shipment notification	(DESADV)	
• Invoice/Credit Note	(INVOIC)	
• Delivery Schedule Response	(DELRSP)	• **Delivery Schedule process**
• Delivery Schedule/ Delivery Forecast	(DELFOR)	
• Inventory Report	(INVRPT)	• **Consignment stock process**
• Self Billing invoice	(SBI)	

Paradigm Shift for Purchase to Pay (P2P) – Siemens is pushing EDI rollout with its suppliers

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Manufacture

Industrialization

e2e Digitalization

Paradigm Shift Digitalization

- > 80% of transactions digitized
- Interfaces with key business processes

- End-to-end Focus (Order to Invoice)
- Professionalized Onboarding of suppliers

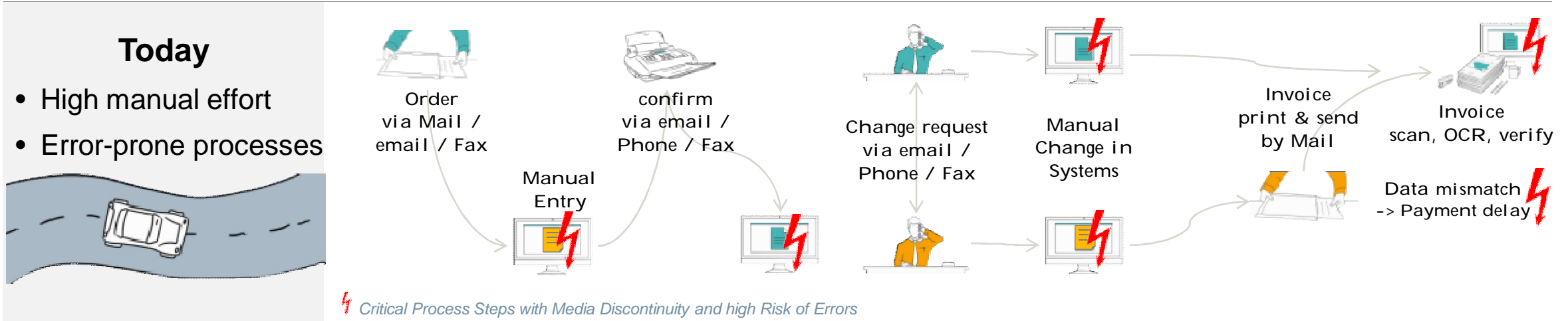- Individual connections
- < 20% PO transactions digitized

Time axis not scaled

2015

2017

2020+
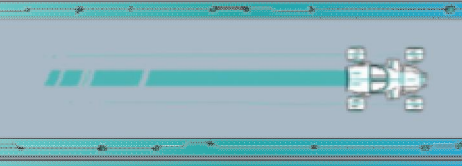
What is the change for the P2P process?
End-to-end solution is covering transactions from Order to Invoice

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Today

- High manual effort
- Error-prone processes

Order via Mail / email / Fax

Manual Entry

confirm via email / Phone / Fax

Change request via email / Phone / Fax

Manual Change in Systems

Invoice print & send by Mail

Invoice scan, OCR, verify

Data mismatch -> Payment delay

Critical Process Steps with Media Discontinuity and high Risk of Errors

Tomorrow

- e2e digitized P2P
- Efficiency & Speed

5 e-messages

Order → Order Confirmation → Order Change → Dispatch Advice → Invoice

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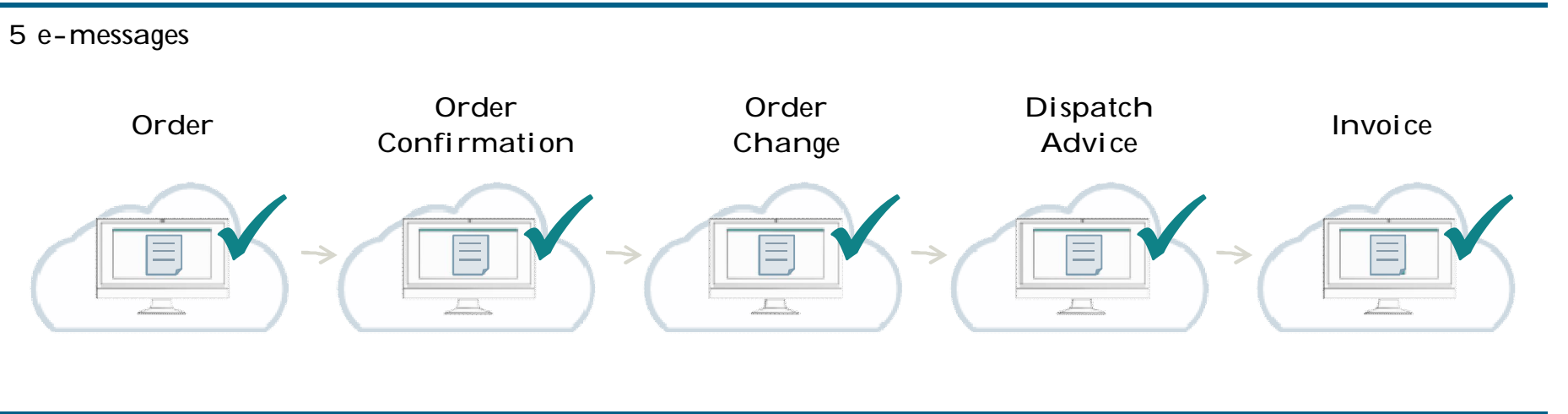
What will be better/ what will be improved?

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Speed ↑
Working time↓, 3 - 39min less manual effort per process
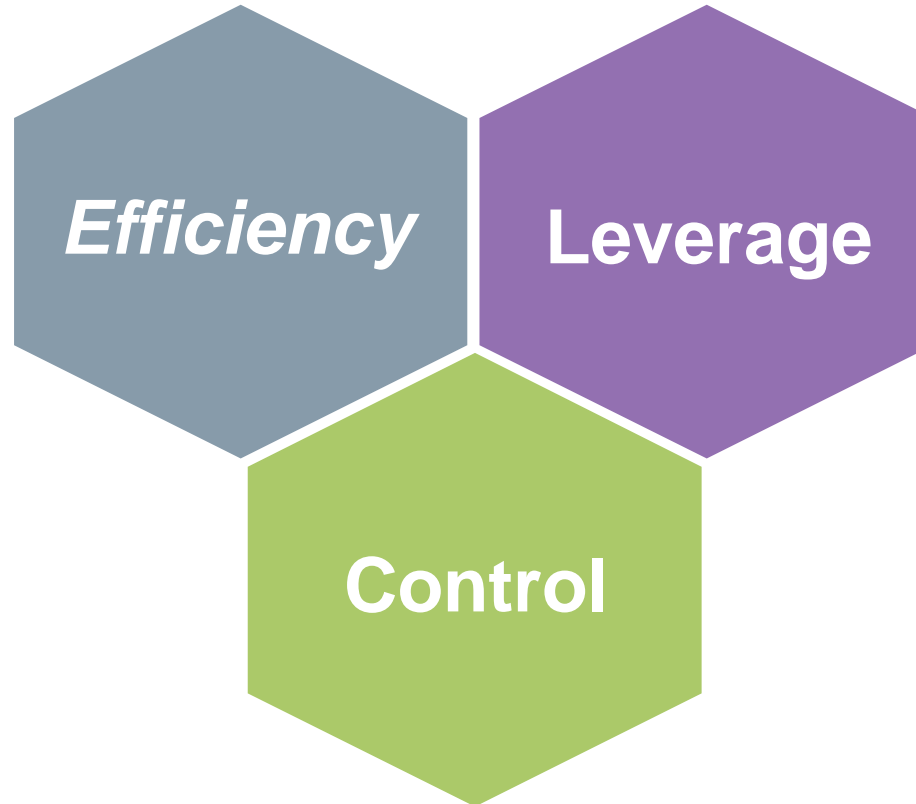
Quality ↑
Accurate Data and Master Data, eliminate error of manual data entry

CO² Footprint
Eliminate printing, paper, envelope, postage

Efficiency

Leverage

Standardization ↑
Simplified procedures, streamlined checks, process security

Agility ↑
Transparency enables better prod. scheduling, SC planning, inventory mgt

Control

Transparency ↑
Full process transparency as pre-requisite for improvement
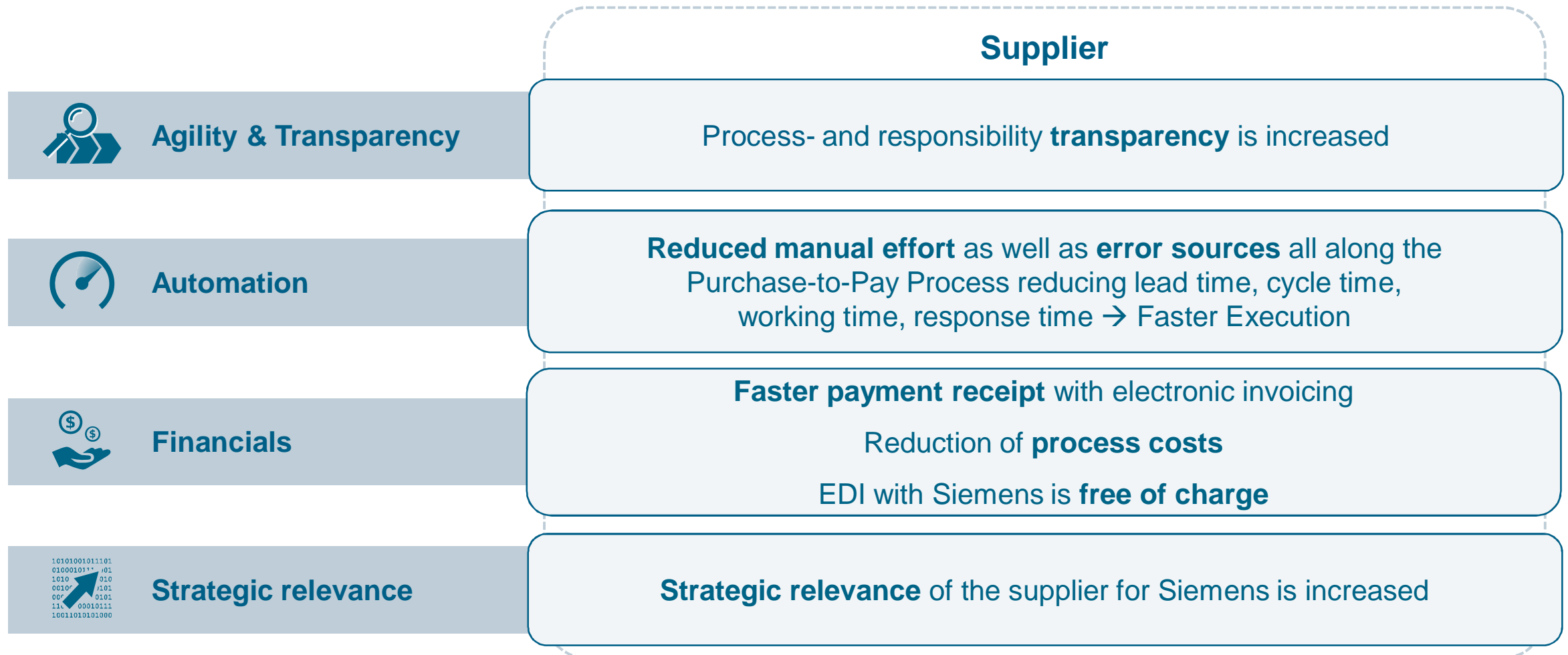
Compliance ↑
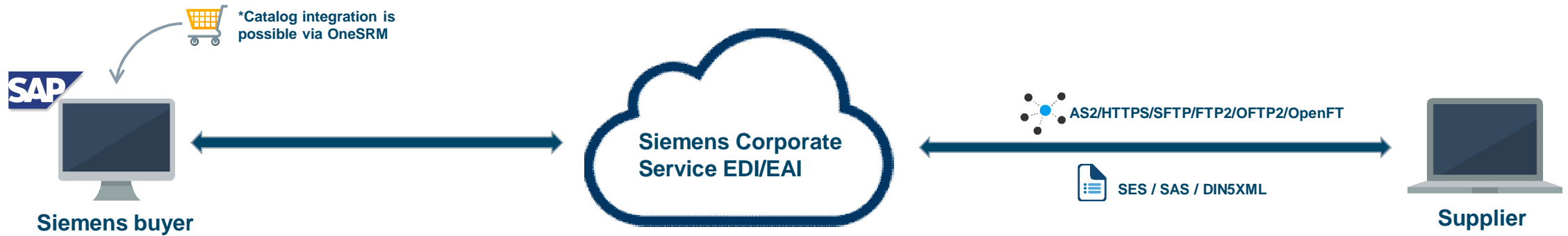accurate, transparent information enables compliance & security

Performance Measurement ↑
Better Supplier Performance Evaluation via higher data quality

Benefit of the EDI usage for suppliers

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Supplier

Agility & Transparency

Process- and responsibility **transparency** is increased

Automation

Reduced manual effort as well as **error sources** all along the Purchase-to-Pay Process reducing lead time, cycle time, working time, response time → Faster Execution

Financials

Faster payment receipt with electronic invoicing

Reduction of **process costs**

EDI with Siemens is **free of charge**

Strategic relevance

Strategic relevance of the supplier for Siemens is increased

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Seite 8   13.11.2017

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Siemens Communication protocols and EDI formats

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*Catalog integration is possible via OneSRM

Siemens buyer

Siemens Corporate Service EDI/EAI

AS2/HTTPS/SFTP/FTP2/OFTP2/OpenFT

SES / SAS / DIN5XML

Supplier

Communication protocols	
1	AS2
2	HTTPS
3	SFTP
4	FTPs
5	OFTP2 (via TCP/IP)
6	OpenFT
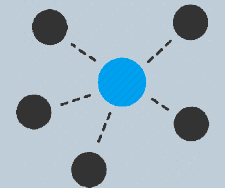
Message formats	
1	SES (Siemens EDIFACT Standard, Directory D.10A)
2	SAS (Siemens ANSI X12 Standard)
3	DIN5XML (proprietary XML format, based on segment names of SES)

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Siemens EDI formats - examples

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SES

```
UNA:+.?*'
UNB+UNOB:4::1+TEST+SEDIS-ETS+20100809:1316+00000000042359'
UNH+00000067217937+ORDERS:D:05A:UN'
BGM+220+Bestellnummer++AC'
DTM+137:20100809:102'
DTM+453:20100806:102'
ALI+++19+17'
RFF+AOG:00000067217937'
RFF+AGK:GB05448657'
NAD+SU+S0000099::234++Lieferant GmbH+Musterweg 1+Musterort++11111+DE'
CTA+PD+Auftragssabteilung:Hr. Musterbearbeiter'
COM+11111111:TE'
COM+musterbearbeiter(a)lieferant.com:EM'
NAD+UC+++Lieferort+Anlieferstrasse 3+Musterhausen++11111+DE'
CTA+PD'
NAD+BY+S0000057::234++Siemens AG+Otto-Hahn-Ring 3+Muenchen++81769+DE'
RFF+VA:DE11111111'
CTA+PD+Einkaufsabteilung:Fr. Musterbearbeiterin'
COM+?+49 111111:TE'
COM+?+49 111111:FX'
COM+musterbearbeiterin(a)siemens.com:EM'
CUX+2:EUR:9'
LIN+000001++Artikelnummer:VP'
PIA+1+Art.nr Kunde:BP'
IMD+B++:::Artikelbeschreibung Langtext'
QTY+21:1.000:PCE'
DTM+2:20100813:102'
PRI+CAL:14.2:?*A::1:PCE'
UNS+S'
MOA+116:14200:EUR'
UNT+29+00000067217937'
UNZ+1+00000000042359'
```

DIN5XML

```
<?xml version="1.0" encoding="ISO-885
<DIN>
<INTERCHANGE>
<S_UNB>
  <C_S001>
    <D_0001>UNOB</D_0001>
    <D_0002>4</D_0002>
    <D_0133>1</D_0133>
  </C_S001>
  <C_S002>
    <D_0004>TEST</D_0004>
  </C_S002>
  <C_S003>
    <D_0010>SEDIS-ETS</D_0010>
  </C_S003>
  <C_S004>
    <D_0017>20100809</D_0017>
    <D_0019>1316</D_0019>
  </C_S004>
    <D_0020>00000000042359</D_0020>
</S_UNB>
<MESSAGE>
<S_UNH>
    <D_0062>00000067217937</D_0062>
  <C_S009>
    <D_0065>ORDERS</D_0065>
    <D_0052>D</D_0052>
    <D_0054>05A</D_0054>
    <D_0051>UN</D_0051>
  </C_S009>
</S_UNH>
<S_BGM>
  <C_C002>
    <D_1001>220</D_1001>
  </C_C002>
  <C_C106>
    <D_1004>Bestellnummer</D_1004>
```

SAS

```
ISA~00~~00~~ZZ~SIEUSESUP~01~038962429~090812~1927~U~00401~000000183~0~P~^
GS~PC~SIEUSESUP~038962429~20090812~1927~183~X~004010
ST~860~000000001
BCH~04~SA~Bestellnummer~~~20090812~~~~~20090812
CUR~BY~USD
REF~OQ~Bestellnummer~CUSTOMER ORDER NUMBER
FOB~FO~ZZ~SHIPPING POINT
N1~BY~Siemens AG~92~S0000057
N3~Otto-Hahn-Ring 3
N4~Muenchen~FL~81769~DE
REF~DP~B003~Einkaufsabteilung
PER~AE~Fr. Musterbearbeiterin~TE~+49 111111~FX~+49 111111
N1~SU~Lieferant GmbH~92~S0000099
N4~Musterort~PA~11111~DE
N1~ST~Lieferort
N3~Anlieferstrasse 3
N4~Musterhausen~TX~11111~DE
POC~00001~CA~1000~1000~FT~14.2~~~~BP~Art.nr Kunde
PID~F~~~~Artikelbeschreibung Langtext
SCH~1000~FT~~~002~20090828
SE~48~000000001
GE~1~183
IEA~1~000000183
```

EDI setup process

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1   Siemens and the supplier agree to electronically process order and invoice processes; Result: EDI Agreement is signed

Responsible: Siemens purchasing department and supplier

2   Supplier receives kickoff information incl. "SES docu" account for message guidelines download from CS EDI
Responsible: Siemens CS EDI

3   Set-up of the communication via defined file transfer protocols between CS EDI and supplier (exchange of technical parameters and testing of connection)

Responsible: Siemens CS EDI and supplier

4   Provision of test messages (Siemens --> Supplier) by Siemens purchasing department via CS EDI
Responsible: Siemens requesting unit provides first test messages; Siemens CS EDI routes message to the supplier

5   Supplier sets up a mapping for the agreed message types (inhouse mapping or via service provider hired by supplier)
Responsible: supplier or supplier's service provider; Siemens CS EDI provides support and explains Siemens specific details

EDI setup process

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6   Supplier sends test messages for agreed message types (possibilities: order response; invoice; dispatch advice)

Responsible: supplier

7   Review of syntactic accuracy of the message by CS EDI (error protocols will be provided to the supplier)

Responsible: Siemens CS EDI

8   Review of content accuracy of the message by purchasing department/accounting department of Siemens

Responsible: Requesting Siemens unit / Accounting

9   End-to-End testing between Siemens and supplier, testing full message set
Responsible: Requesting Siemens unit and supplier

10   Scheduling Go-live after successful testing between Siemens purchasing department, CS EDI and supplier

Responsible: Requesting Siemens unit, Siemens CS EDI, supplier

Contacts

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Message guidelines can be ordererd __before__ EDI agreement is signed via email