

A woman with long dark hair, wearing a grey coat, is shown in profile from the waist up, looking down at a tablet computer she is holding with both hands. The background is a blurred cityscape at night, with various lights creating a bokeh effect. The overall color palette is dark with some warm highlights from the city lights.

E-Supplier

Information for the EDI exchange with Siemens

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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

Message types

Business processes

- Purchase Order (ORDERS)
- Purchase Order Change (ORDCHG)
- Order acknowledgement/confirmation (ORDRSP)
- Dispatch Advice/Shipment notification (DESADV)
- Invoice/Credit Note (INVOIC)

- **P2P (Purchase to Pay)**

- Delivery Schedule Response (DELRSP)
- Delivery Schedule/ Delivery Forecast (DELFOR)
- Inventory Report (INVRPT)
- Self Billing invoice (SBI)

- **Delivery Schedule process**

- **Consignment stock process**

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



Manufacture



Industrialization



e2e Digitalization

Paradigm Shift Digitalization

- Individual connections
- < 20% PO transactions digitized

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

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

Time axis not scaled

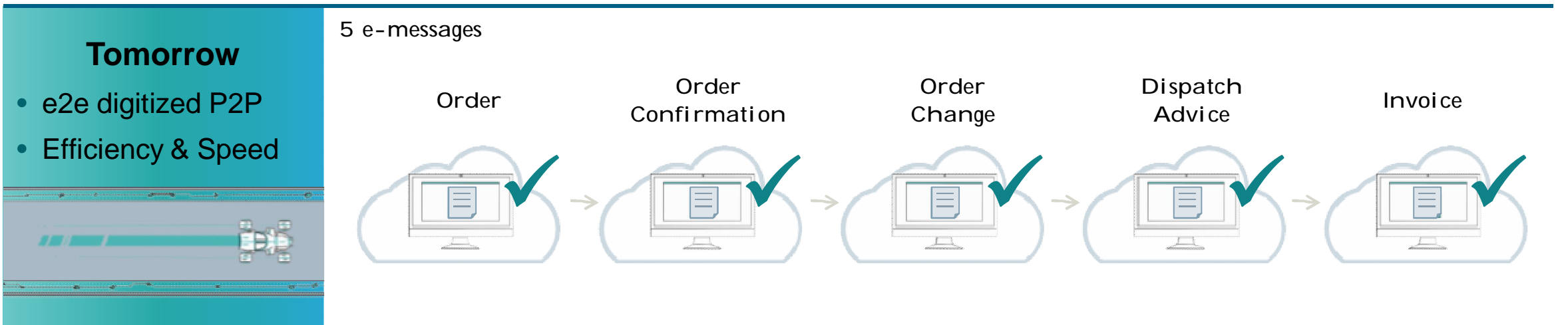
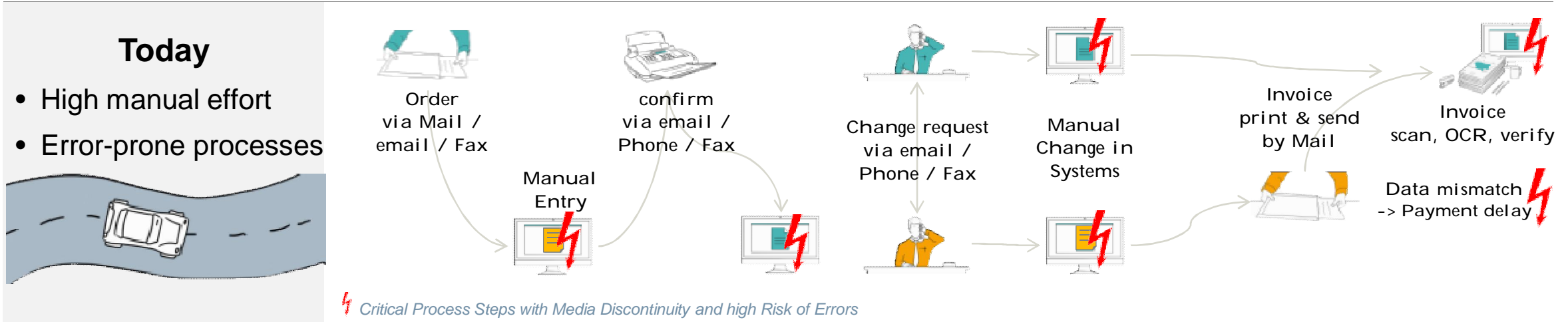
2015

2017




2020+

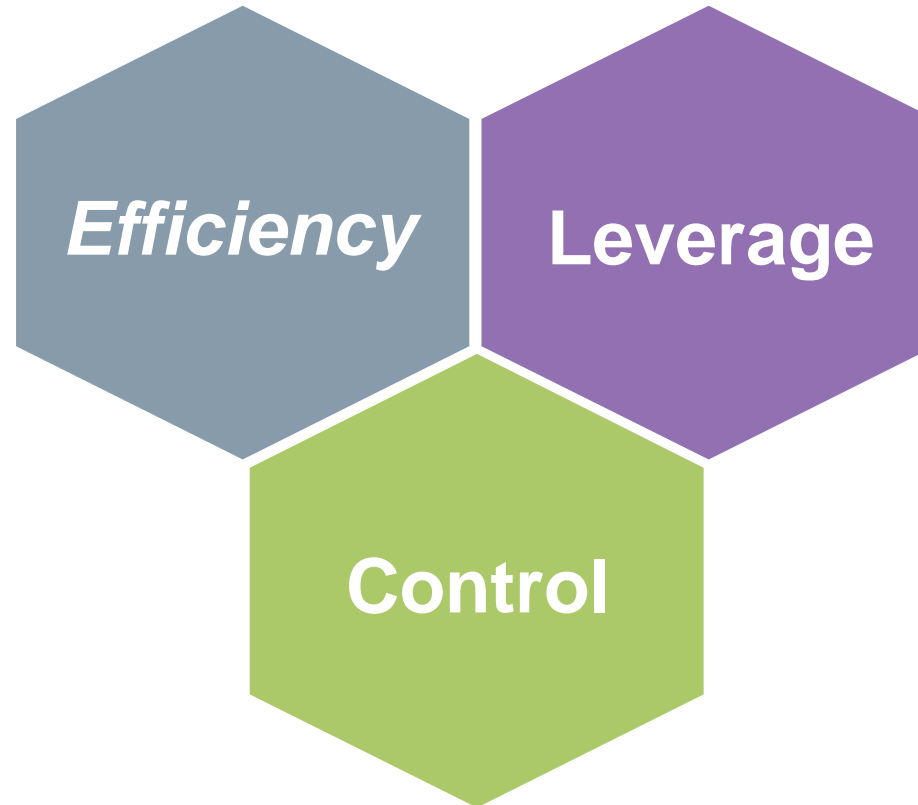
What is the change for the P2P process?



End-to-end solution is covering transactions from Order to Invoice





What will be better/ what will be improved?

-  **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



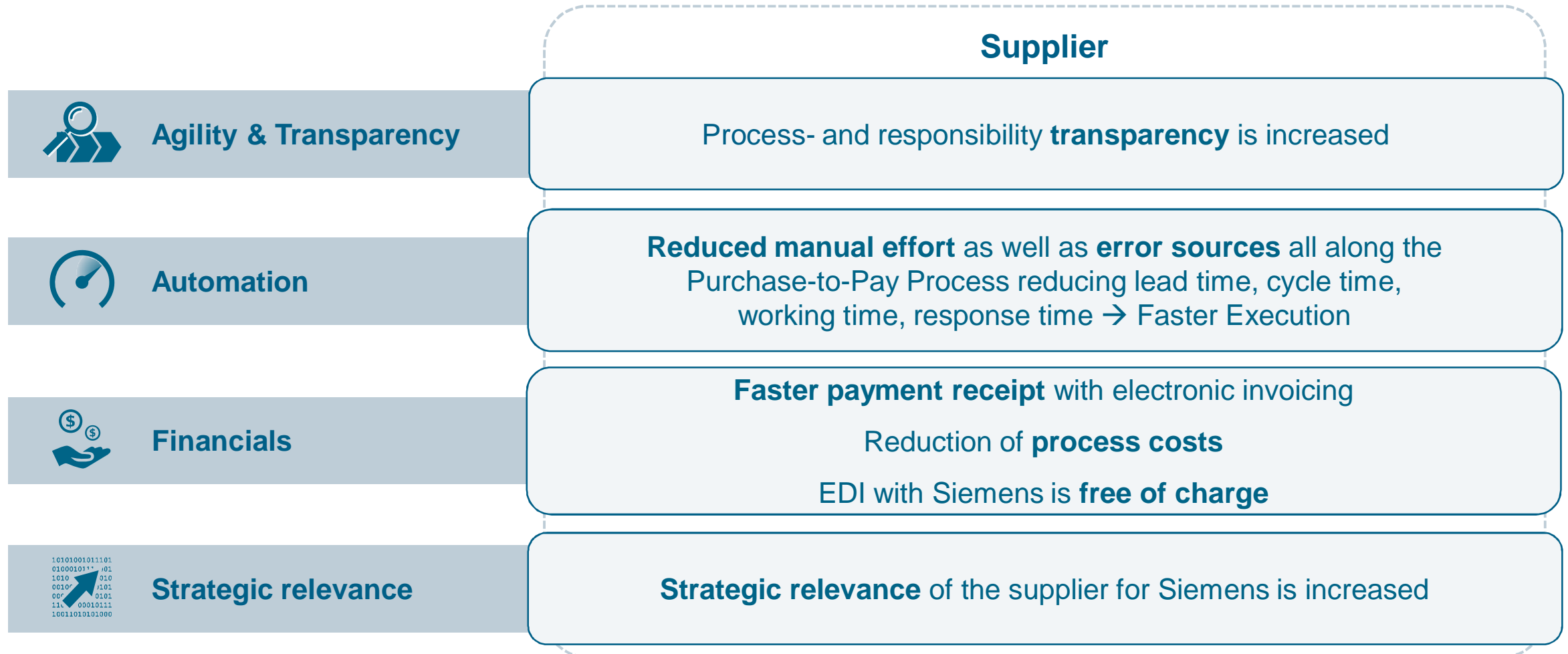
-  **Standardization ↑**
Simplified procedures, streamlined checks, process security
-  **Agility ↑**
Transparency enables better prod. scheduling, SC planning, inventory mgt

-  **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

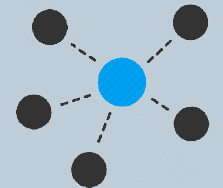


Siemens Communication protocols and EDI formats



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)



Siemens EDI formats - examples

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:DE111111111'  
CTA+PD+Einkaufsabteilung:Fr. Musterbearbeiterin'  
COM+?+49 11111:TE'  
COM+?+49 11111: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-8859-1">  
<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>  
<D_0020>0000000042359</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 11111~FX~+49 11111  
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

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

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



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*Message guidelines can be ordererd **before** EDI agreement is signed via email*