Simplification List – TOP Items
Business Partner Approach / Customer-Vendor Integration (CVI)

Overview
Specific
Related

June, 2017

Customer

SAP

SAP S/4 HANA

TOP Item - Business Partner Approach: General Information
TOP Item – At A Glance

Simplification List Item Description

- There are redundant object models in the traditional ERP system. Here the vendor master and customer master is used. The (mandatory) target approach in SAP S/4HANA is the Business Partner approach (Customer-Vendor Integration [CVI]).
- Business Partner is now capable of centrally managing master data for business partners, customers, and vendors. With current development, BP is the single point of entry to create, edit, and display master data for business partners, customers, and vendors.
- The specific tables for customer data (KNA1) and vendor data (LFA1) remain available and are not impacted.

Business Impact

- Only SAP Business Suite customer with C/V integration in place can move to SAP S/4HANA, on-premise edition (Conversion approach).
- It´s recommended but not mandatory that BuPa ID and Customer-ID / Vendor ID are the same.
  Note: In case of overlapping number ranges for Customer and Vendor in Business Suite start system additional number range alignment is required!
- The user interface for SAP S/4HANA, on-premise edition is transaction BP and the Customer and Supplier Fiori App. The specific transaction codes to maintain customer/vendor separately like known from SAP Business Suite, are not available within SAP S/4HANA.
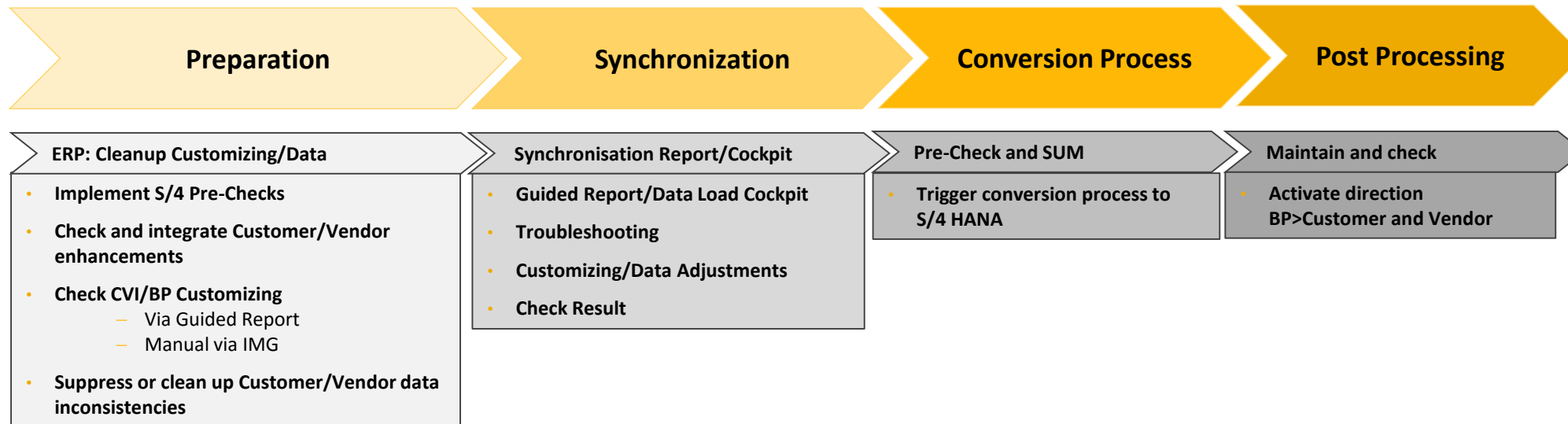
Required and Recommended Action(s)

- Execute the related conversion pre-checks. Adaption required in dependency to the pre-check results
- Necessary CVI Business Partner transformation customizing settings and checks must be performed
  (Note 2344034 - Report CVI_UPGRADE_CHECK_RESOLVE)
- Remove and avoid inconsistent customizing and inconsistent customer data (for example: Missing customizing tax types or inconsistent customer data like e-mail addresses without @-sign)

TOP Item - Business Partner Approach: Specific Information
Overview

S/4HANA future-oriented Business Partner

- In S/4 HANA we provide with the business partner as leading object additional embedded future-oriented features to provide new processes and improving the existing ones
- The BP transaction and the Customer/Supplier Apps are the single point of entry to create, edit, and display master data for business partners, customers, and vendors

S/4 HANA BP transformation requires the following steps

Preparation	Synchronization	Conversion Process	Post Processing
ERP: Cleanup Customizing/Data	Synchronisation Report/Cockpit	Pre-Check and SUM	Maintain and check
• Implement S/4 Pre-Checks	• Guided Report/Data Load Cockpit	• Trigger conversion process to S/4 HANA	• Activate direction BP>Customer and Vendor
• Check and integrate Customer/Vendor enhancements	• Troubleshooting		
• Check CVI/BP Customizing	• Customizing/Data Adjustments		
– Via Guided Report	• Check Result		
– Manual via IMG			
• Suppress or clean up Customer/Vendor data inconsistencies			

TOP Item - Business Partner Approach: Specific Information
Business Partner Features

S/4HANA future-oriented Business Partner

- A legal entity is represented with one Business Partner
  - One unique Business Partner for different roles e.g. Customer, Supplier, Contact, (Employee not part of CVI)
  - A BADI solution during conversion can be provided to create a Business Partner (one legal entity out of a customer and vendor (Note 2363892)
- Different Business Partner Categories – Organization, Person, Group
- Maximal data sharing and reuse of data which leads to an easier data consolidation
- General Data available for all different business partner roles, specific data is stored for each role
- Several Addresses possible with a default Address
- Flexible Business Partner Relationships possible like contact, married etc.
- Time dependency on different sub entities e.g. roles, address, bank data etc.
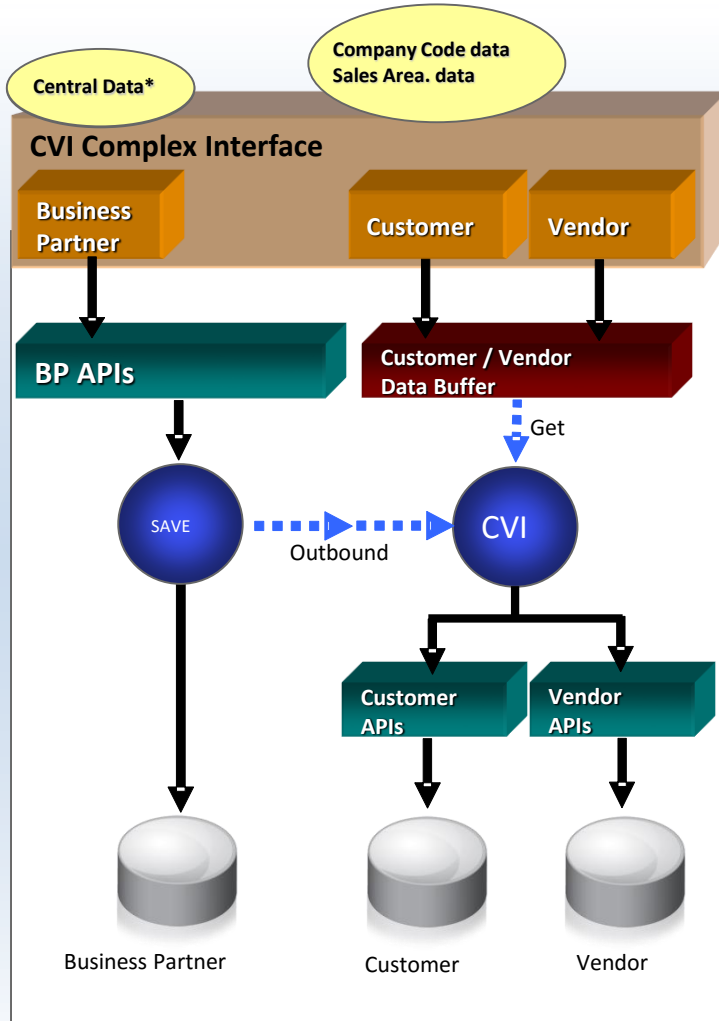- Fiori User Interface with a specific Customer and Supplier Partner App

TOP Item - Business Partner Approach: Specific Information
Integrated Object Model: Customer / Vendor Integration

Central Data*

**Company Code data
Sales Area. data**

CVI Complex Interface

| Business Partner | Customer | Vendor |

BP APIs

Customer / Vendor Data Buffer

Get

SAVE

Outbound

CVI

Customer APIs

Vendor APIs

Business Partner

Customer

Vendor

Example: Customer Creation

A **Business Partner** is always created when a customer or supplier is created.

The complex interface of the CVI (Customer-Vendor-Integration) contains **Business Partner** specific data as well as **Customer and Vendor** specific data.

Partially, the data of the Business Partner and Customer/Vendor are redundant (BUT000 against KNA1 & LFA1 data). *For instance 'Name and Address specific attributes' are available in both persistencies*.

Customer or Vendor specific data is routed through the Customer/Vendor specific interface and mixed up with the Business Partner central data.

On commit, the **Business Partner and corresponding Customer and/or Vendor** is maintained / created.
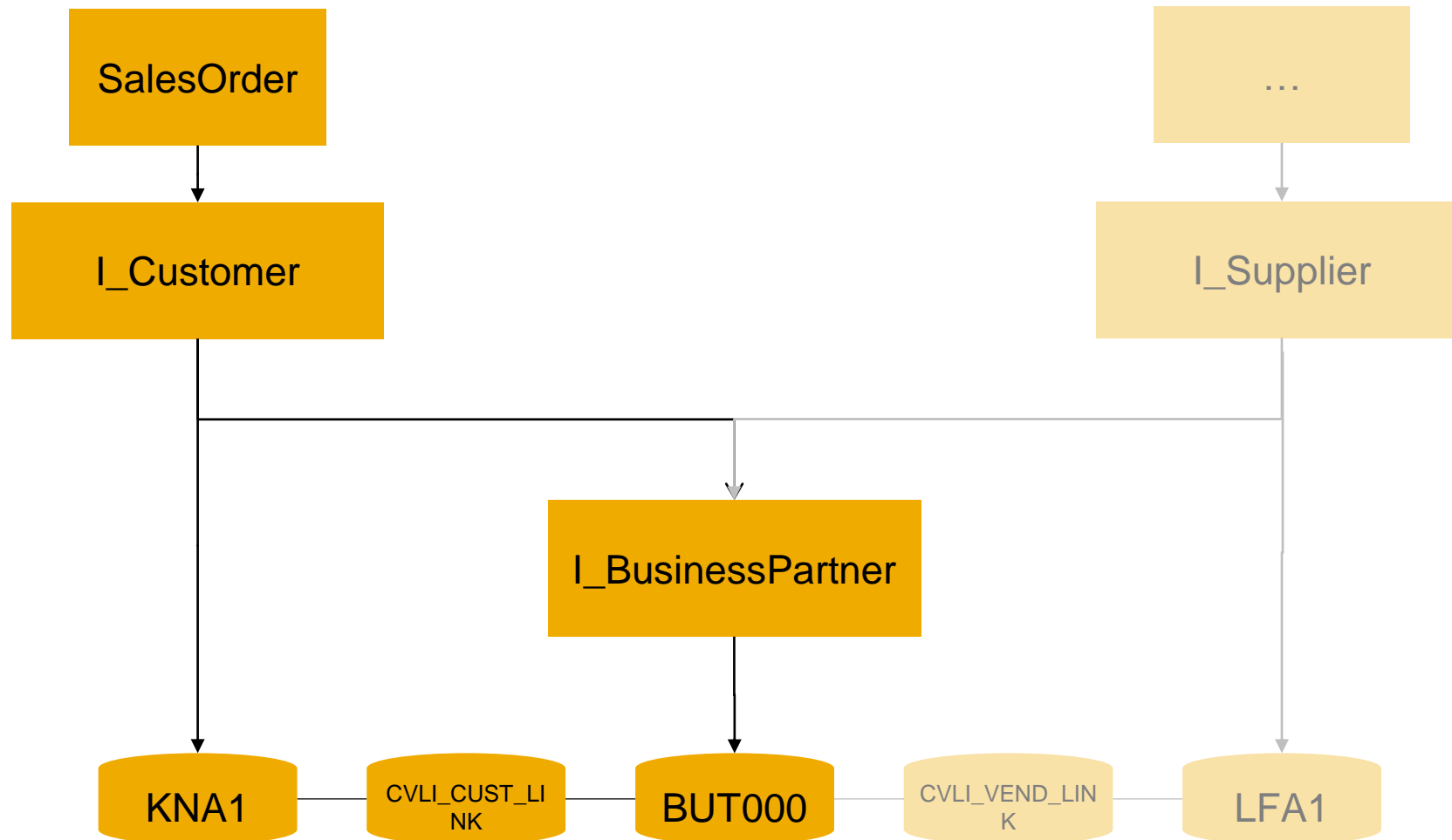
TOP Item - Business Partner Approach: Specific Information
Data Model BP – Implications of non Harmonized Numbers

TOP Item - Business Partner Approach: Specific Information
Business Impact and Precondition

Business Impact

- SAP Business Suite customer can move from different start releases to SAP S/4 HANA, on-premise edition
- Only SAP Business Suite customer with C/V integration in place can move to SAP S/4HANA, on-premise edition 1610
- To ensure a successful upgrade all customers/vendors and all contacts which relates to customer or vendor must be converted to a Business Partner including customers, vendors and assigned contacts with the deletion flag
- Before you execute the conversion SAP recommends to archive the customer/vendor with the deletion flag
- It´s recommended but not mandatory that BuPa ID and Customer-ID / Vendor-ID are the same

Precondition

- As the Business Partner is used in different applications and the transformation needs also technical understanding it requires good business and technical expertise
- On-premise start release needs to have a minimum release level e.g. SAP ERP 6.0, EHP 0-7
- S/4 HANA Simplification list must be known
- Conversion Process must be known

TOP Item - Business Partner Approach: Specific Information
Preparation Tasks

There are six main preparation tasks

- Implement Pre-Checks as described in Conversion Guide for SAP S/4HANA, on-premise edition 1610: Link
- Archive customer/vendor data with deletion flag (optional)
  – SAP recommends to archive the customer/vendor with the deletion flag
- Activate Business Functions
  – For the Transformation the Business Functions Business Foundation: Services for Supplier
    (CA_BSOAP) must be active.
- Check and integrate Customer/Vendor enhancements (optional)
  – BP/CVI Enhancement Cookbook and Extensible Objects (XO) consulting Notes 2309153 and 1623809
- Necessary CVI Business Partner transformation customizing settings and checks must be performed. For more details see Conversion Guide for SAP S/4HANA, on-premise edition Note 2265093.
- Remove and avoid inconsistent customizing and inconsistent customer data
  – Guided customizing settings and mapping checks available
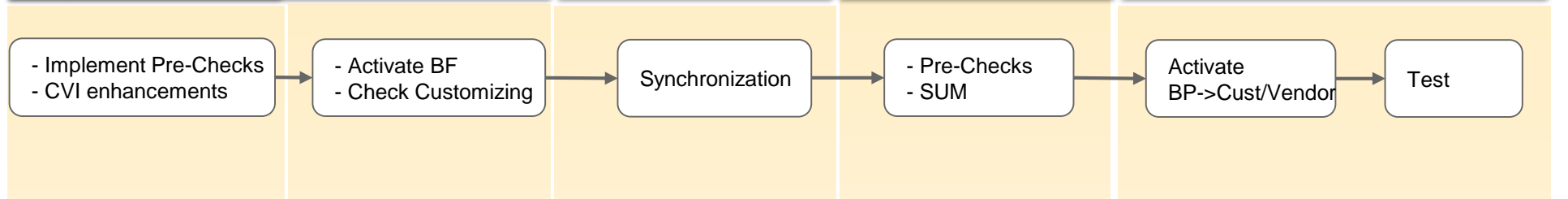 – Clean up or ignore mandatory and country specific field checks (Note 2336018 and 2344034)

TOP Item - Business Partner Approach: Specific Information
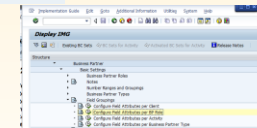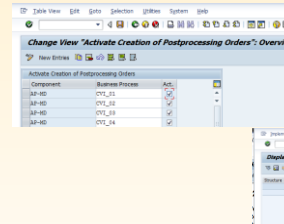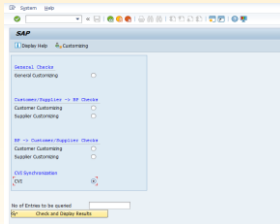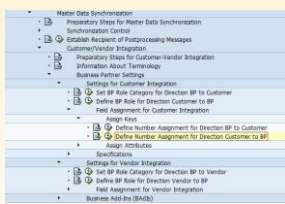## Steps and involvement

Preparation	Synchronization	Conversion	Post Processing / Test

- Implement Pre-Checks
- CVI enhancements

→

- Activate BF
- Check Customizing

→

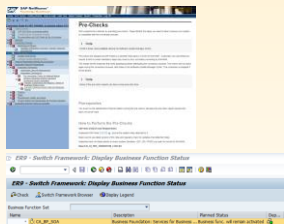Synchronization

→

- Pre-Checks
- SUM

→

Activate BP->Cust/Vendor

→

Test

Consultants are involved in the transformation activities

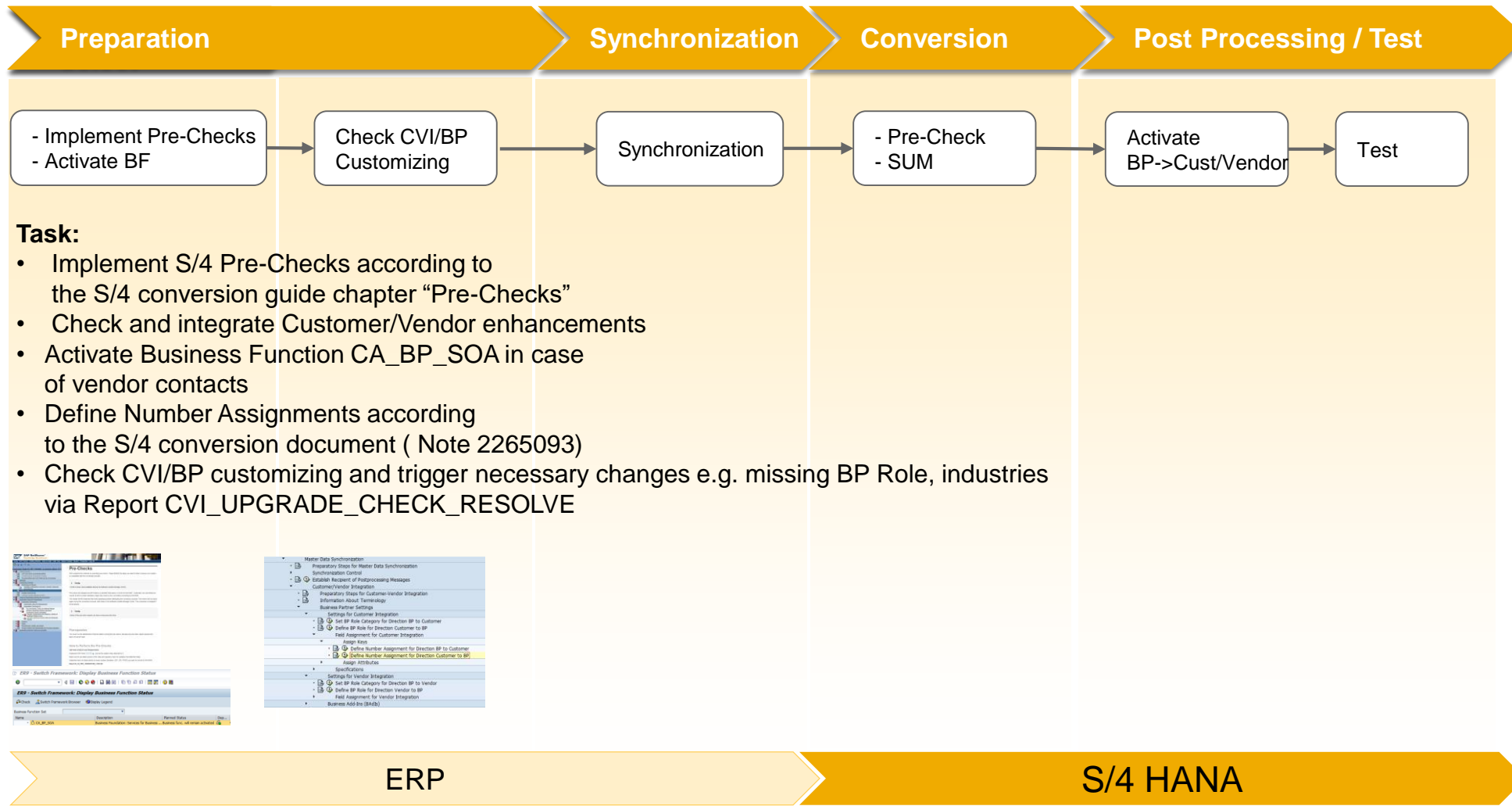**Application contacts are involved in the transformation activities**

ERP

S/4 HANA

TOP Item - Business Partner Approach: Specific Information
Preparation Tasks

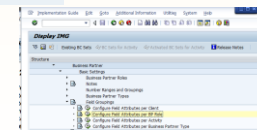| Preparation	Synchronization	Conversion	Post Processing / Test

- Implement Pre-Checks
- Activate BF

Check CVI/BP Customizing

Synchronization

- Pre-Check
- SUM

Activate BP->Cust/Vendor

Test

Task:
- Implement S/4 Pre-Checks according to the S/4 conversion guide chapter "Pre-Checks"
- Check and integrate Customer/Vendor enhancements
- Activate Business Function CA_BP_SOA in case of vendor contacts
- Define Number Assignments according to the S/4 conversion document (Note 2265093)
- Check CVI/BP customizing and trigger necessary changes e.g. missing BP Role, industries via Report CVI_UPGRADE_CHECK_RESOLVE
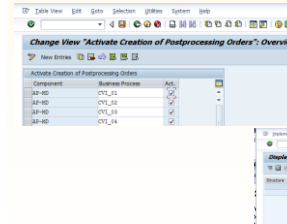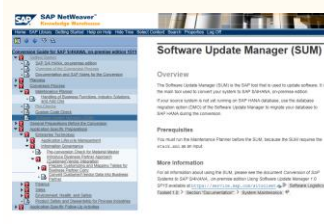
ERP	S/4 HANA

TOP Item - Business Partner Approach: Specific Information
Synchronization tasks

Preparation		Synchronization	Conversion	Post Processing / Test

- Implement Pre-Checks
- Activate BF

→

Check CVI/BP
Customizing

→

Synchronization

→

- Pre-Check
- SUM

→

Activate
BP->Cust/Vendor

→

Test

Task:
- Synchronization can be done via
  Report CVI_UPGRADE_CHECK_RESOLVE
  or via Synchronization Cockpit
  In case of errors
  due to data/customizing mismatch
  you will find the errors in the log
  of the report/cockpit
- Verify the results according to the
  Note 2211312

ERP	S/4 HANA
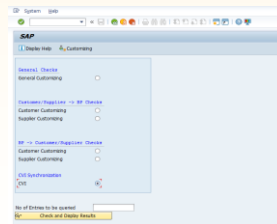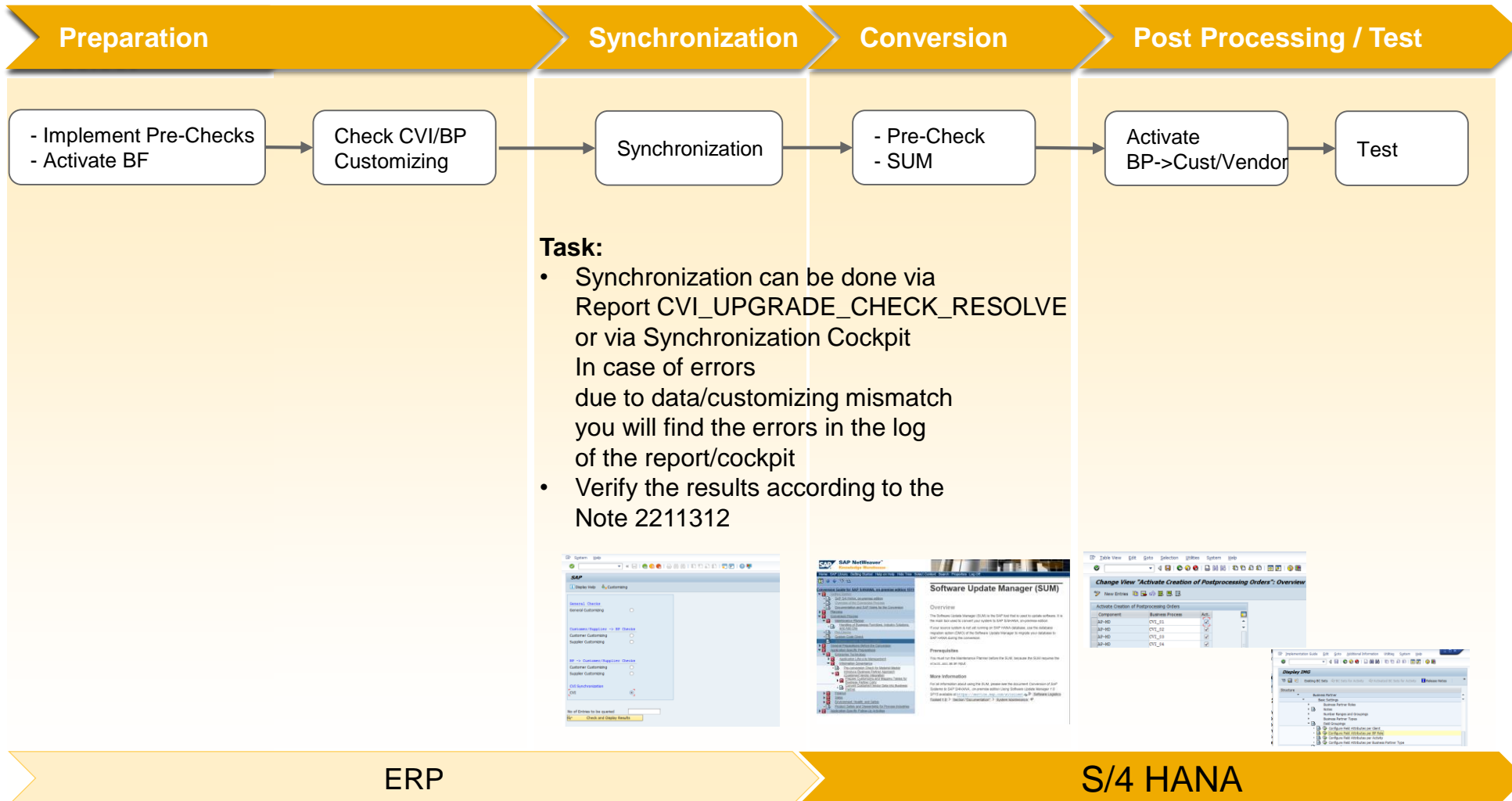
TOP Item - Business Partner Approach: Specific Information
Conversion tasks

Preparation		Synchronization	Conversion	Post Processing / Test

- Implement Pre-Checks
- Activate BF

→ Check CVI/BP Customizing

→ Synchronization

→ - Pre-Check
- SUM

→ Activate BP->Cust/Vendor

→ Test

Task:
- Conversion Process must be triggered according to the S/4 Conversion guide

ERP	S/4 HANA
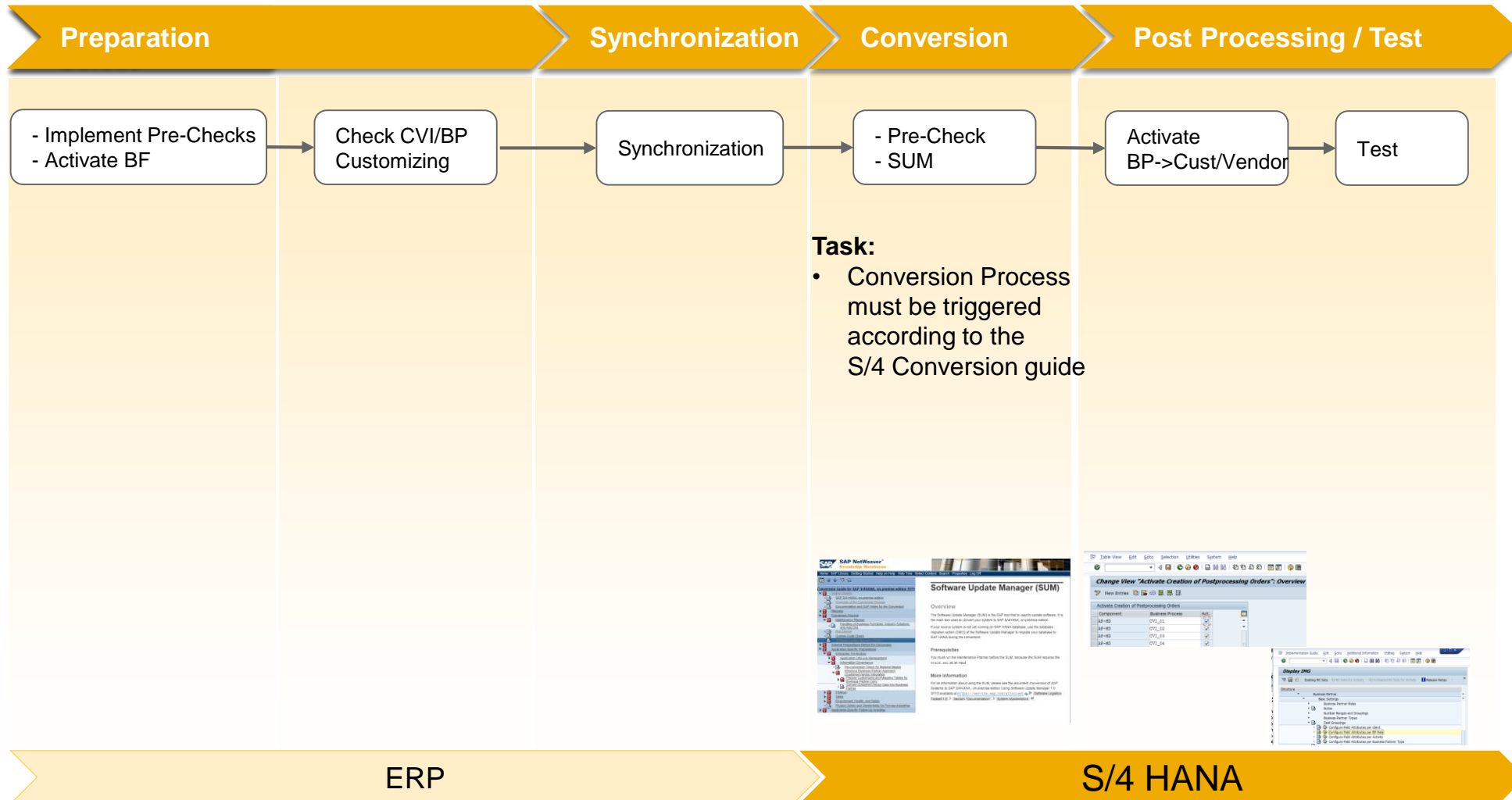
TOP Item - Business Partner Approach: Specific Information
Post Processing tasks
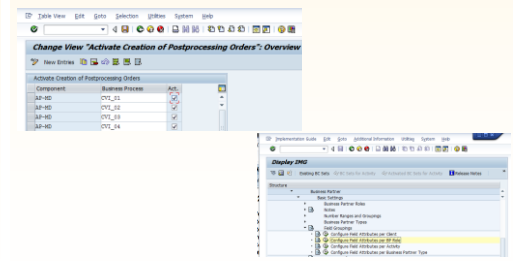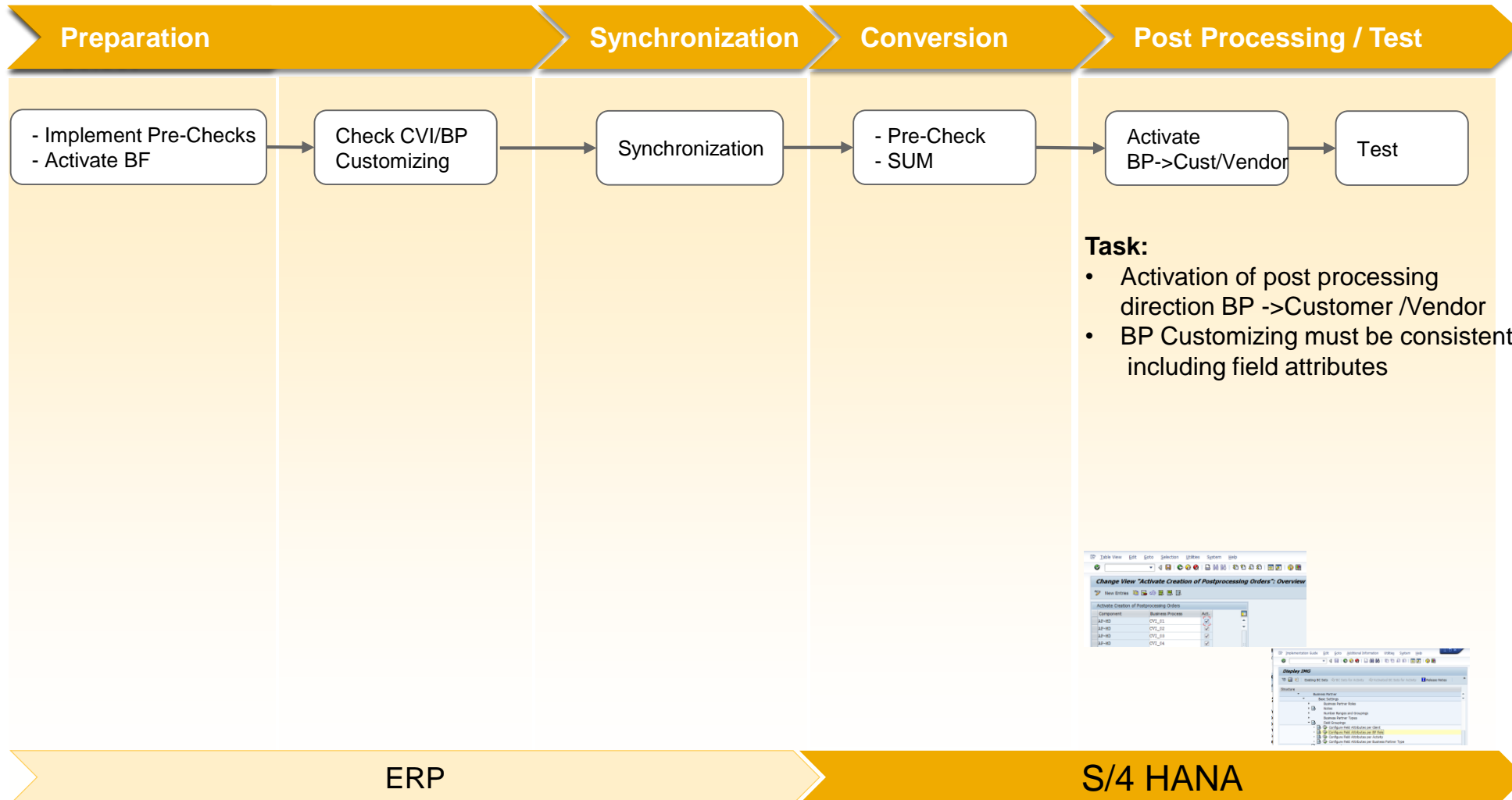
Preparation		Synchronization	Conversion	Post Processing / Test

- Implement Pre-Checks
- Activate BF

→ Check CVI/BP Customizing → Synchronization → - Pre-Check
- SUM → Activate BP->Cust/Vendor → Test

Task:
- Activation of post processing direction BP ->Customer /Vendor
- BP Customizing must be consistent including field attributes

ERP	S/4 HANA

TOP Item - Business Partner Approach: Specific Information
How much time will that require?

Total transformation time

The total CVI transformation time depends on different factors, such as

- BP/CVI/Pre-Check Know-How
- Customer/Vendor/BP number ranges
- BP Customizing consistency including field attributes
- Customer/Vendor/Business Partner Data consistency
- Customer/Vendor Enhancements (Extensions)
- Data volume
- Dependent on the number of parallel processes (Synchronization Cockpit)
  - E.g. 20 parallel processes depending on the hardware
- Dependent on the selected block size and therefore memory consumption
  - Default is set to 50 in case several contacts for one BP exist
  - Block size greater than 100 should not be maintained

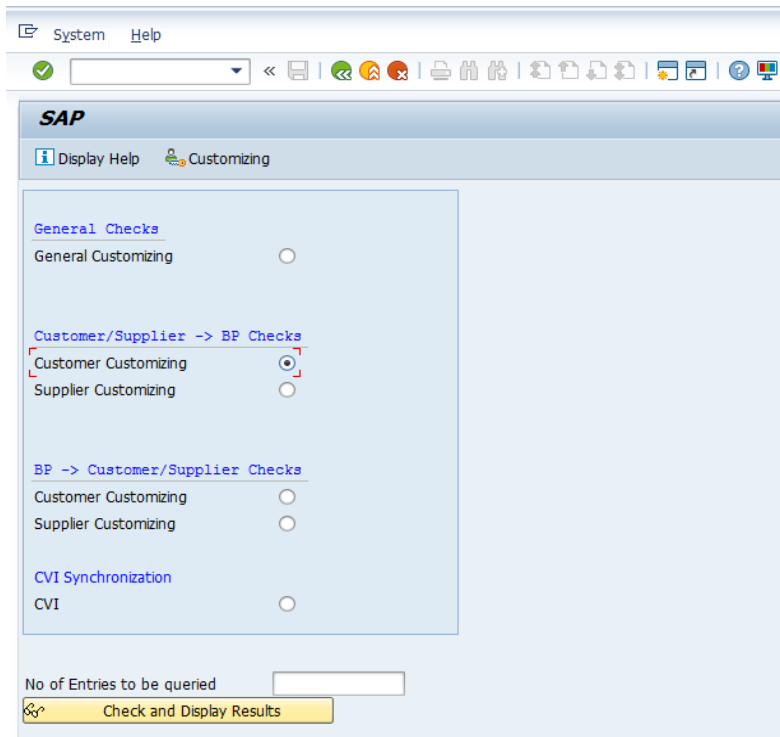# TOP Item - Business Partner Approach: Specific Information
Guided CVI Customizing and Synchronization

- Guided CVI Customizing (Note 2344034)
 - The simple guided wizard report allows based on existing customer/vendor data to handle the CVI Customizing more quickly with concrete proposals for necessary customizing entries
  - A detailed Report Documentation is available in the above mentioned Note
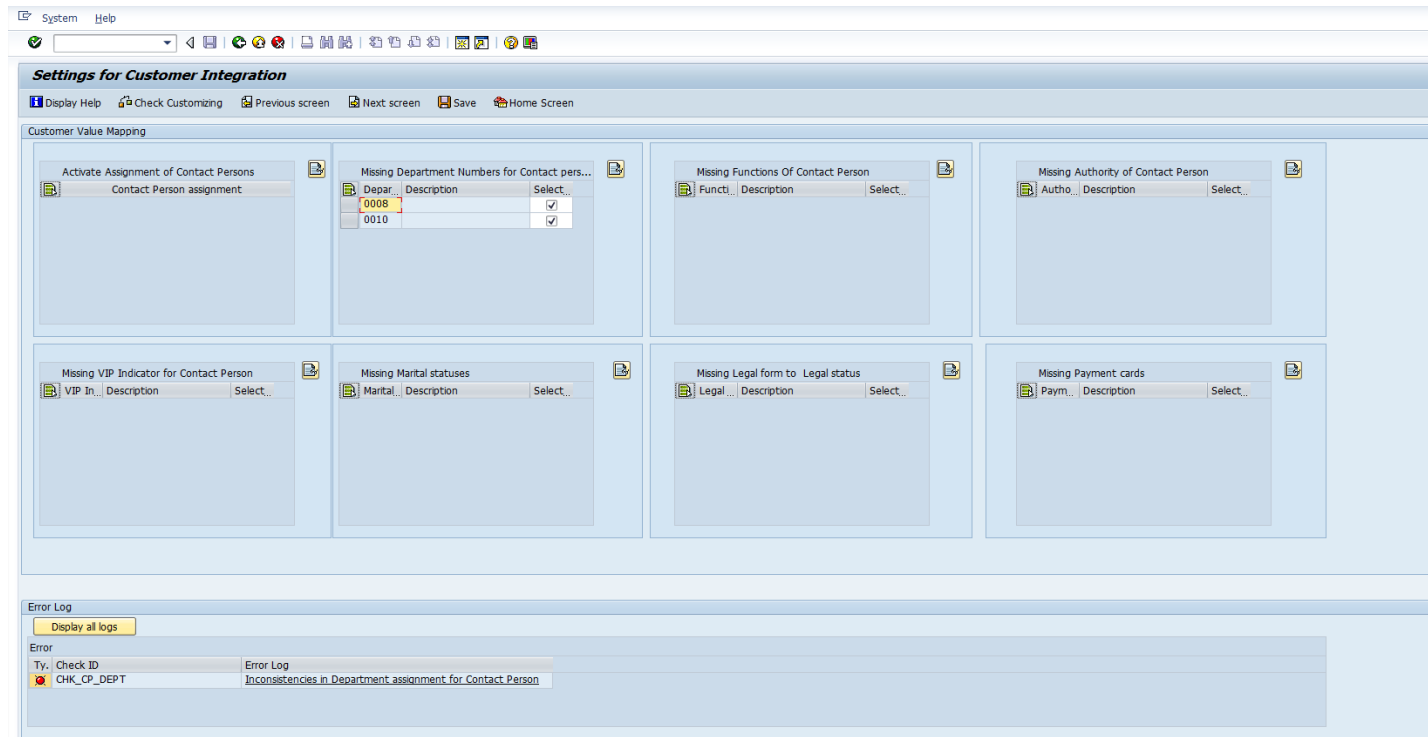
TOP Item - Business Partner Approach: Specific Information
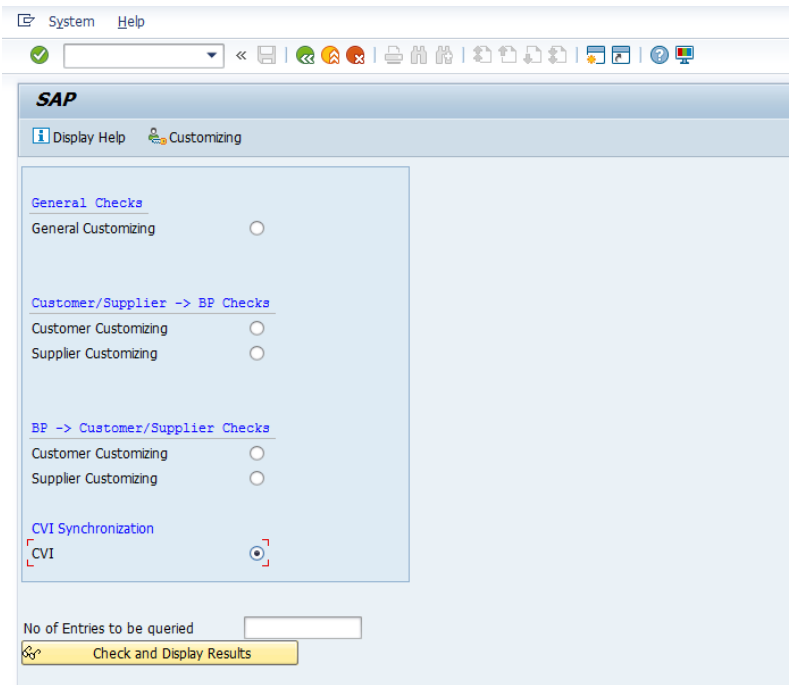## Guided CVI Customizing and Synchronization

- CVI Synchronization
  - The simple guided wizard report allows based on existing customer/vendor data to handle the CVI Synchronization more quickly (PDF Documentation is available in Note 2265093)
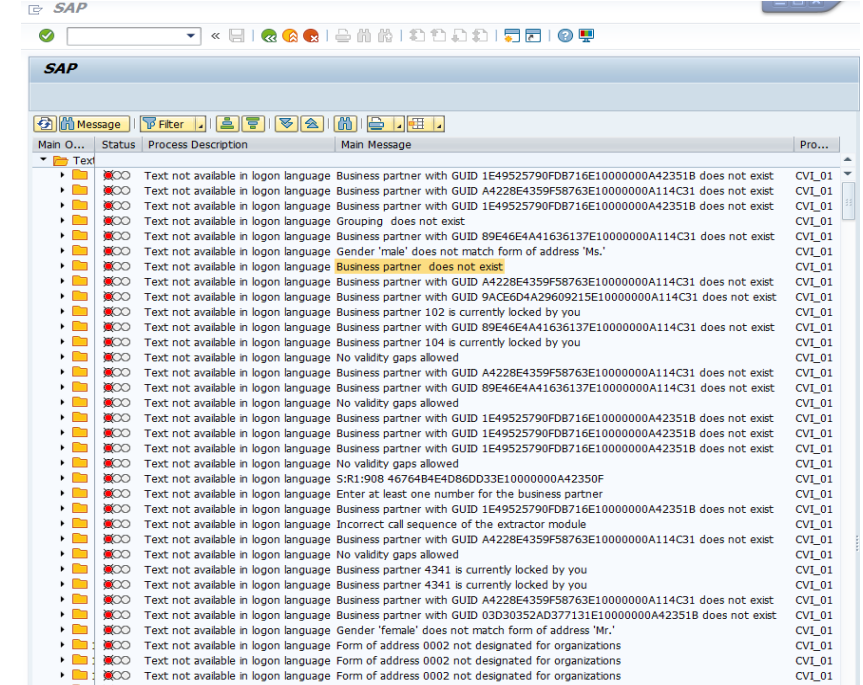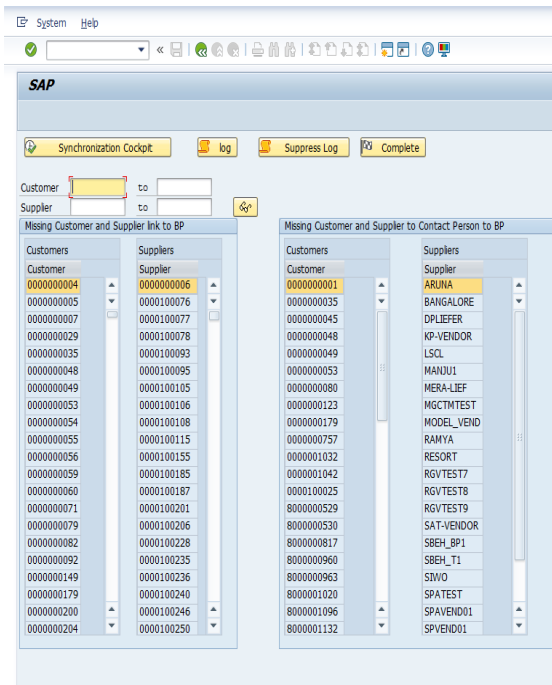
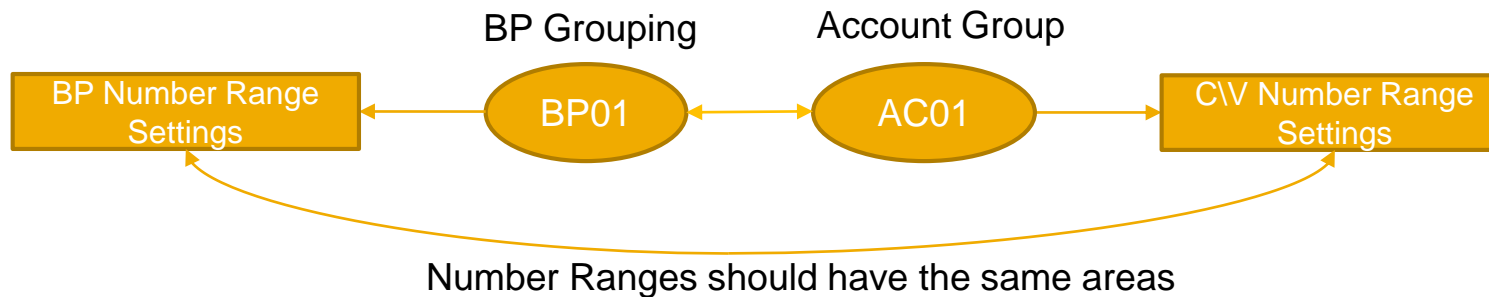# TOP Item - Business Partner Approach: Specific Information
Business Partner/Customer/Vendor Number Range Definition

- The business partner grouping defines the number range of the Business Partner
- The account group defines the number range of the customer/vendor master record
- Both groups determine the numbers in which a business partner and a customer or vendor are created

BP Grouping   Account Group

```
BP Number Range        BP01        AC01        C\V Number Range
   Settings                                        Settings
```

Number Ranges should have the same areas

SAP recommends to keep the customer/vendor number the same when converting to business partners
Only when there is a conflict in number ranges between customer and vendor (same number is used for different customer and vendor), one of the entities has to take a different BP number

The guided CVI conversion report determines overlaps and suggests proposals for conflicting number range settings

TOP Item - Business Partner Approach: Specific Information
Business Partner/Customer/Vendor Authorization Management

- The business partner authorization objects control the authorization for maintaining Business Partner Data
  – Additional authorization fields and field groups checks can be already in place via the Business Data Toolset (BDT)
- The customer and vendor authorization objects control the authorization for maintaining customer and vendor data
- Authorization Objects are defined for different data segments like General Data, Company Data, Sales Data
  – Business Partner and Customer/Vendor authorization objects are partly redundant e.g. General Data

During the synchronization the system checks if all necessary authorizations exist

TOP Item - Business Partner Approach: Specific Information
Business Partner/Customer/Vendor Field Control

BP Data Field Control Definition

- Client level
- Role level determined via BP Group

Customer/Vendor Data Field Control Definition

- Account Group
- Only evaluated on save of the BP

BP Field Control is supplemented by Customer/Vendor field control based on account groups and is independent of BP Client/Role

TOP Item - Business Partner Approach: Specific Information
Important data consistency checks

The checks are mainly based on the BP customizing- A few important checks are listed below

Central Data Checks

- Check on BP Roles/Grouping
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Basic Settings => Define BP Roles/ Role Grouping
- Check on Number Ranges
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Basic Settings => Define Number Ranges/Groupings and Assign Number Ranges
- Check of partner id e.g. !,#,* not allowed

Address Checks

- Check on Address data e.g. title Forms of Address (Tables TSAD3)
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Forms of Address => Maintain Forms of address
- E-mail must contain @
- Bankdetails Checks
  - Check on bank data e.g. bank key must be available

Organization Checks

- Industry must exist (SAP Table TB038)
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Organizations=> Maintain Industry Systems and Industries
- Legal Forms must exist (SAP Table TB019)
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Organizations=> Maintain Industry Systems and Industries
- Legal Entity must exist (SAP Table TB032)
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Organizations=> Maintain Industry Systems and Industries

Taxnumber checks

- Tax Type must exist in the Tax Number Categories (SAP Table TFKTAXNUMTYPE)
  - Customizing: Cross Application Components => SAP Business Partner => Business Partner => Basic Settings=>Tax Numbers=>Maintain Tax Number Categories

TOP Item - Business Partner Approach: Specific Information
Lessons Learned Overview

- General learnings
  - Until today every conversion had its own challenges concerning customer data
  - Business Partner and technical expertise required
  - Conversion Guide, Simplification List should be known
  - Business Partner customizing mandatory fields group checks can be suppressed during conversion (Note 2336018) due to missing/inconsistent customer/vendor data
    - BP Field group checks are defined in Business Partner Customizing->Basic Settings-Field Groupings
    - Additional checks e.g. country specific like tax code, postal code can be suppressed via BADI or customizing (TA OY17)
      - Check and Resolve report can restore the entries after a successful conversion
  - Retail Business Partner Data and Customer as Consumer are not part of the conversion
    - Beginning with OP1511FPS2 also consumers are handled via CVI (Direction BP->Customer)
    - One time customer and consumer are not yet handled via CVI (Direction Customer->BP)
  - Number Range assignment is very important
    - Create BP Grouping for each customer/vendor account group
    - Internal BP number range also used for BP contact IDs (Standard Grouping for Internal Number Assignment is selected)
  - Name change from ERP Vendor to S/4 Supplier

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Synchronization issues

Direction Customer/Vendor -> BP

- Inconsistencies may exist in the Customer/Vendor/Address e.g. e-mail addresses without @-sign

- Inconsistencies may exist in the Customer/Vendor/BP customizing

- Inconsistencies in the CVI link tables can exist – Implement reports via OSS Note **974504**

- See also on the next slide possible customizing /master data issues

- Customer/Vendor change transaction or correction reports which replace the erroneous values with correct values might be necessary

- Special data situation can occur e.g. customers/vendors exist with the same numbers representing the same legal entity
  - Require a correction report e.g. OSS Note **954816**

- ERP/Customer Vendor is always of category type organization
  - Customer-specific mapping via Business Add-Ins possible

Direction BP ->Customer/Vendor

- Activation of the Postprocess Orders for CVI_03 and CVI_04 necessary

- No specific user interface for customer/vendor like known from SAP Business Suite available - redirect to BP Transaction

- Limited number of customer & supplier fields in transaction BP available see Note 2214213

- BP Customizing must be consistent including field attributes for each BP Role category

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Customizing/Master Data issues

Customizing issues (missing or incomplete customizing)

- Tax number categories
- Industries
- Address forms
- Departments
- Legal forms

Master Data quality issues

- Wrong format for dates, tax codes, trading partners, bank keys, bank account numbers, postal code, bank control key
- Missing / non existing links (e.g. customer <-> vendor)
- Missing account holders
- Non existing TAX and VAT values, bank numbers
- Missing links to ADRC table

- **Formatting issues and missing references and links can not be solved by suppressing errors The wrong formatted/missing references data must be cleaned up**

- **Field checks errors can be suppressed via Note 2336018 and Note 2344034**

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Suppress Country Field Checks errors

Root cause:

- Existing customer country fields is defined with a length different than specified in the country settings

How to resolve:

- Implement BADI mentioned in Note 2344034
- No error log is provided
- After successful conversion run the CVI_UPGRADE_CHECK_RESOLVE report is able to restore the checks rules)
- Directly via customizing OY17 (No restore possibility)
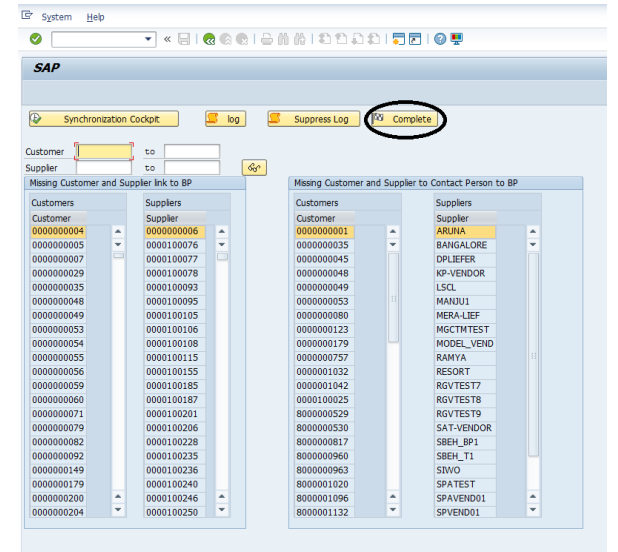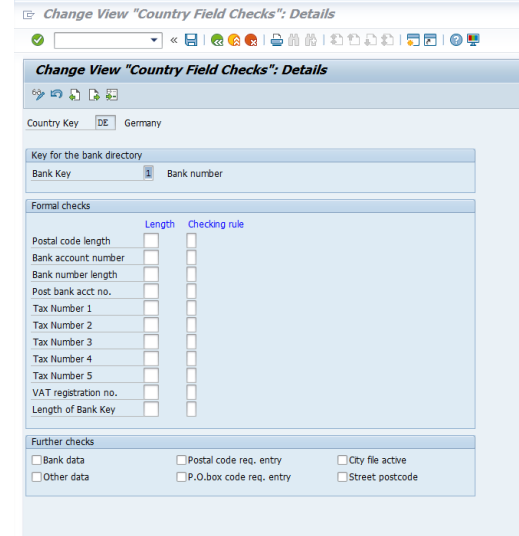
TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Resolve configuration Issues
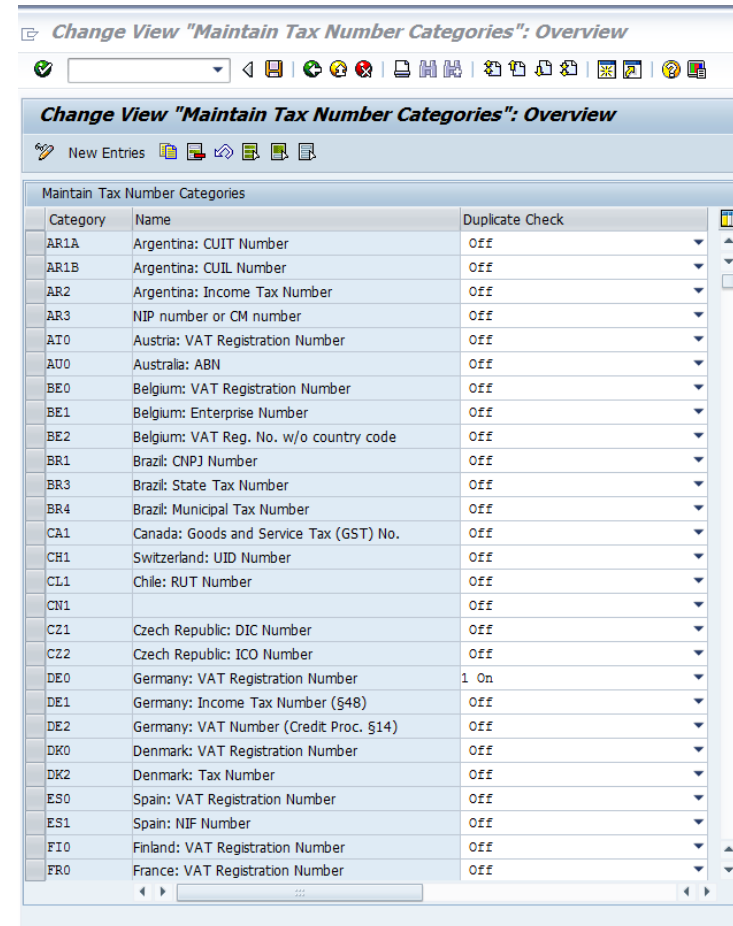
Tax number category doesn't exist

Root cause:
- Tax number category hasn't been defined in table TFKTAXNUMTYPEC

How to resolve:
- Add tax number category to table TFKTAXNUMTYPE, TFKTAXNUMTYPEC
- Adjust Customizing: Cross Application Components => SAP Business Partner => Business Partner => Basic Settings=>Tax Numbers=>Maintain Tax Number Categories

Change View "Maintain Tax Number Categories": Overview

Maintain Tax Number Categories

Category	Name	Duplicate Check
AR1A	Argentina: CUIT Number	Off
AR1B	Argentina: CUIL Number	Off
AR2	Argentina: Income Tax Number	Off
AR3	NIP number or CM number	Off
AT0	Austria: VAT Registration Number	Off
AU0	Australia: ABN	Off
BE0	Belgium: VAT Registration Number	Off
BE1	Belgium: Enterprise Number	Off
BE2	Belgium: VAT Reg. No. w/o country code	Off
BR1	Brazil: CNPJ Number	Off
BR3	Brazil: State Tax Number	Off
BR4	Brazil: Municipal Tax Number	Off
CA1	Canada: Goods and Service Tax (GST) No.	Off
CH1	Switzerland: UID Number	Off
CL1	Chile: RUT Number	Off
CN1		Off
CZ1	Czech Republic: DIC Number	Off
CZ2	Czech Republic: ICO Number	Off
DE0	Germany: VAT Registration Number	1 On
DE1	Germany: Income Tax Number (§48)	Off
DE2	Germany: VAT Number (Credit Proc. §14)	Off
DK0	Denmark: VAT Registration Number	Off
DK2	Denmark: Tax Number	Off
ES0	Spain: VAT Registration Number	Off
ES1	Spain: NIF Number	Off
FI0	Finland: VAT Registration Number	Off
FR0	France: VAT Registration Number	Off

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Resolve configuration Issues

Specify Industry
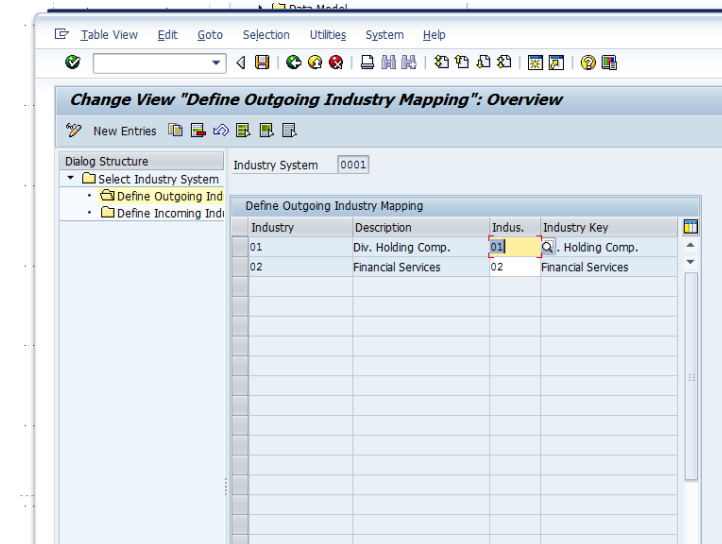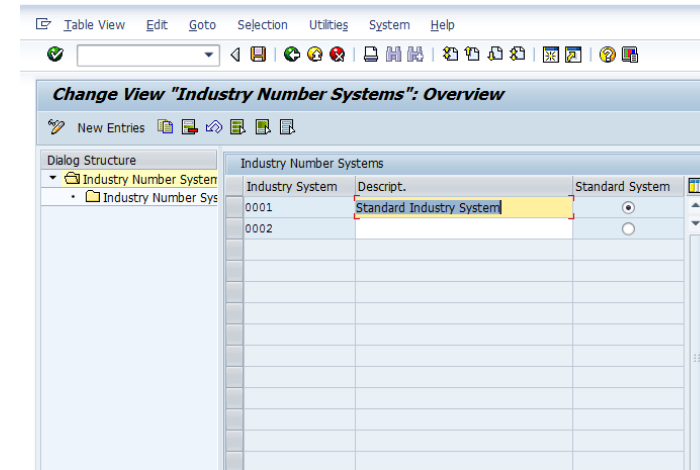
Root cause:

- Industry hasn't been defined in the industry system

How to resolve:

- Adjust Customizing: Cross Application Components
  => SAP Business Partner => Business Partner => Organizations => Maintain Industry Systems and Industries

Now this industry needs to be mapped to the new industry in the Customer/Vendor integration customizing by the definition of the mapping for outgoing and incoming industries

- Adjust Customizing: Cross Application Components => Master Data Synchronization => Customer Vendor Integration => Business Partner Settings =>
  - Settings for Customer integration =>Field assignment for Customer Integration => Assign Attributes => Assign industries
  - Settings for Vendor integration =>Field assignment for Vendor Integration => Assign Attributes => Assign industries

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Resolve configuration Issues
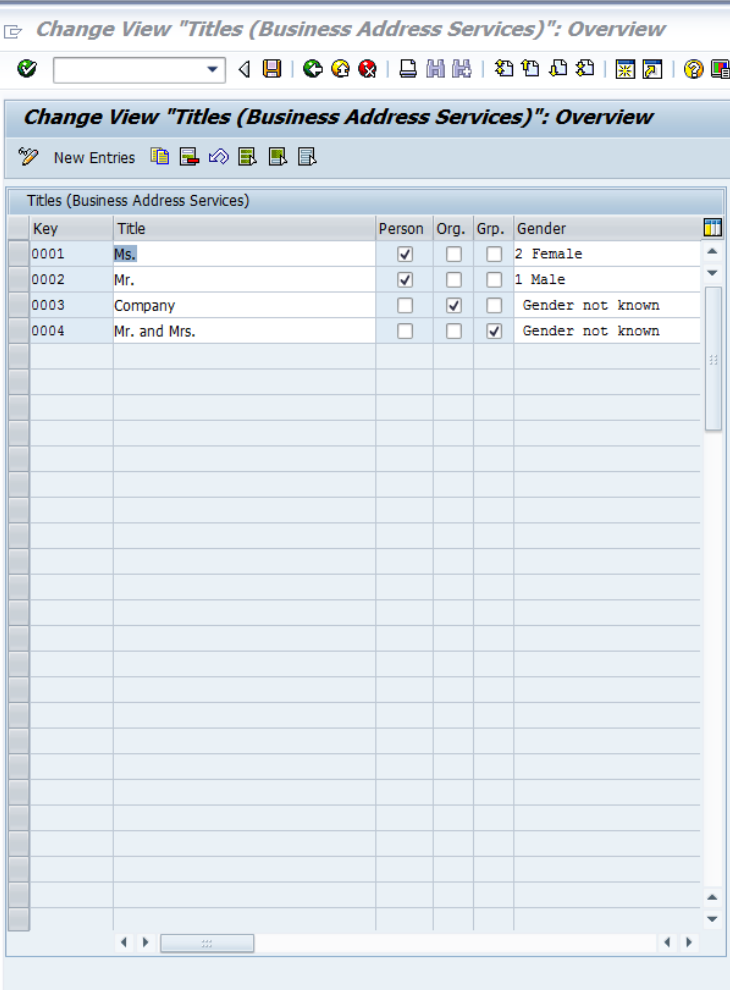
Address form is not configured for organizations

Root cause:

- Address form hasn't been configured for usage by organizations

How to resolve:

- Adjust Customizing: Cross Application Components =>
  SAP Business Partner => Business Partner =>Basic Settings=>
  Forms of Address => Maintain Forms of address

- Set address form xxx valid for organizations and groups.

Change View "Titles (Business Address Services)": Overview

Key	Title	Person	Org.	Grp.	Gender
0001	Ms.	✓	☐	☐	2 Female
0002	Mr.	✓	☐	☐	1 Male
0003	Company	☐	✓	☐	Gender not known
0004	Mr. and Mrs.	☐	☐	✓	Gender not known

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Resolve Master Data quality issues

Existing Account Number/Bank control key not valid

Root cause:

- Bank account number (KNBK-BANKN) is defined with a length different than specified in the country settings
- Bank control key (KNBK-BKONT) is in a wrong format

How to resolve:

- Change the bank account/bank control key to a valid value.
- This can be done via ERP transaction XK02/XD02

TOP Item - Business Partner Approach: Specific Information
Lessons Learned – Resolve Master Data quality issues

Bank key/account holder doesn't exist for country

Root cause:

- Bank key (KNBK-BANKL) specified for a customer/vendor bank account doesn't exist.
- Account holder (KNBK-KOINH) is missing in the bank details record

How to resolve:

- Change the bank key number/account holder to any valid value
- This can be done via ERP transaction XK02/XD02

TOP Item - Business Partner Approach: Related Information
CVI Related Topics Customer and Vendor

- Customer/Vendor functionality are taken over to the Business Partner(BP) transaction
  - Please check Note 2214213 chapter Business Partner and BP attachments
- SD/Customer
  - SD Partner Functions can be still used and is part of the BP transaction - folder Sales and Distribution
  - Customer account group can be changed in the Business Partner(BP) transaction
- S/4 Prospect to customer
  - Create BP with Role Prospect(BUP002) – No KNA1 created
  - Change Role from Prospect to Customer(e.g.FLCU01)
- Hierarchies
  - The already in ERP available hierarchies can be used
    o Customer Hierarchy
    o Vendor Hierarchy
- Mass maintenance
  - Mass Transactions(XD99 and MASS)
  - Mass maintenance Fiori App

TOP Item - Business Partner Approach: Specific Information
CVI Related Topics HCM, CRM and Retail

- Employee Replication
  - Employee Replication is mandatory for Cloud Systems
    - For every Cloud System and User a Business Partner must exist (Identity Management)
  - Conversion of Employees to Business Partner is not part of the CVI and the Synchronization
    - Employee Vendor is converted (BADI Implementation is necessary to change category to person)
  - A separate report after the CVI synchronization and upgrade must be triggered (Note 2340095)

- CRM
  - Business Partner data exchange between S/4HANA and CRM (Note 2283810)
  - Separate CRM Pre-Check available (Note 2303003)

- Retail
  - SAP S/4HANA conversion for site master (Note 2310884)
  - Separate Site Migration Pre-Check available see also above Note site master

TOP Item - Business Partner Approach: Specific Information
Business Partner Interfaces

Public and supported CVI/BP Interfaces

- Migration Note 2287723
  - Legacy System Migration Workbench (LSMW)
  - SAP Rapid Data Migration

- Creation of Business Partner with Customer and Supplier Roles Note 2417298
  - IDOCS
    - CREMAS
    - DEBMAS
  - Webservice
    - BusinessPartnerSUITEBulkReplicateRequest
    - BusinessPartnerRelationshipSUITEBulkReplicateRequest
  - API see above Note

- Data Model mapping and related services see attachments of Note 2221398

TOP Item - Business Partner Approach: Related Information
Additional Information

SAP Help Documentation

Introduce Business Partner Approach
(Customer/Vendor Integration)

For more details see Conversion Guide for
SAP S/4HANA, on-premise edition 1610:
Note 2265093

Synchronization Cockpit

Link

Related Pre-Check Information

SAP Note 2210486 - Business Partner Conversion Report
SAP Note 1696821 -Technical documentation: ASU variant restorer functionality

Additional Information

SAP Note 2265093 - Business Partner Approach
SAP Note 1923393 - Contact Person Synchronization
SAP Note 2399368 - Cockpit Excel Upload
SAP Note 2363892 - Business Partner as one legal entity
SAP Note 2336018 - BP S4HANA : Suppress Mandatory BP field
SAP Note 2345087 - Missing values in required entry fields cause posting termination
SAP Note 2400445 – Customer Company Data - Deletion/archiving/block not visible in BP transaction
SAP Note 2349671 – Supplier Company Data - Deletion/archiving/block not visible in BP transaction