**UDD Process**

**Inputs:**

* MI Files (104 Tables, 26 Layers)
* FIR
* ESRI (Ventia) \ Konnet or RLMU (LL)

**Inventory Chick points:**

* Any FCA Splitting is there or not to avoid duplicate naming convention
* SL Count
* Demand (UFA\_category)
* A & B End Equipment and its Object Status
* Remove all Other ADA\FCA Inscope Planned Cables and Equipment

**Design Process:**

**Step 1: -** Check SLs count for UDD Design

* Check Design SL Count in SL Table
* Valid SLs with FIR and ESRI. Check Below Details
  + Field Inspection Status
  + Lead-in Inspected
  + Lead-in type
  + Lead-in Size
  + LIC Ref ID in FIR
  + Property Type
  + Lead-in Structure ID in FIR

Note:

1. No service Required for Does Not Existing SLs
2. Service Required for Vacant Lands
3. Only for Ventia if SL is Park Area, Check for Existing Copper Connection.
   1. If Yes, Service required for that SL
   2. If No, Service Not required for that SL

Graphical user interface, application

Description automatically generated with medium confidence

Chart

Description automatically generated with low confidence

Changes required in S18

* No change required in S18 for Valid SLs
* Changes in S18 for Invalid SLs:
  + Update DP\_Change as “D or A or C”
  + Update DP\_Note with Specific Reason why it not required Service
  + Remove Assign PCD Details in SL Table for respective Invalid SL

Check LIC Details and update as per Below (Specific cases)

Case1: If Lead-in Pit is Full of Water or Filled with Mud and unable to Access LIC & LIC not Found in General Comment of LIC Sheet (FIR)

Solution: - We can use Existing LIC available in S18

Case2: if Lead-in Pit is clear and unable to Locate LIC in Field Photos (Need to Check all Photos) & LIC not Found in General Comment of LIC Sheet (FIR)

Solution: We Need to plan New LIC from Lead-in and cannot use existing LIC available in S18

Case3: LIC planned in IDD Stage, but Lead-in inspect is “Yes” (Example: Undergoes or Aerial) of SL Details in ESRI and Lead-in Pit Details given in LIC Sheet (FIR)

Solution: - No need to plan new LIC and if any LIC planned in IDD Stage, it needs to Convert as Inservice

Case4: Shared LIC for Custer Pit which is in Property

Solution: - Need to Please new LIC from Street Pit for SL in which Customer Pit is not there

**Step 2: - Validation Design for Optimization if any**

2.1: - Check points for SMP

* Check SMP connectivity is correct or not
  + <168 SLs, Plan SMP for every 7 or below SLs
  + >168 SLs, Plan SMP for every 8 or below SLs
* Check for Reconnecting SLs to nearby SMP if possible, to reduce no of SMPs
* No SDS Cable should Cross over Neighboring SMP
* No SMP should feed from FJL in MEDIUM and HIGH Demand
* Check for Reconnecting SMP to nearby FJL if possible, to reduce Cable Hauling and Design Optimization
* SSS & SDS cable length should be up to 480mtrs

2.2: - Check points for BJL

* Check for Reconnecting SMP to nearby BJL if possible, to reduce no of BJLs
* No SSS Cable should Cross over Neighboring BJL and FJL
* Out Cables must be Max. 4\*SSS & 1\*FSL
* Any Cascading of BJL is possible to reduce the hauling and Cable lengths in LOW Demand
* SSS cable length should be up to 480mtrs & FSL 980mtrs

2.3: - Check points for FJL

* No SSS Cable should Cross over FJL
* Out Cables must be Max. 4\*SSS & 6\*FSL
* Any Cascading of FJL is possible to reduce the hauling and Cable lengths in MEDIUM & HIGH Demand
* FSD 1F cable length should be up to 450mtrs & FSL and FSD 12F 950mtrs

**Step 3: - Run below listed Updating Tools (QGIS Tools)**

Before Running SL to NE tool, Remove complete data of respective table

* Run “SL to PCD” Tool
* Check No. of SLs = No. of PCDs = No. of SDSs
* Run “SL to NE” Tool

**Step 4: -** **Update “Splitter to Enclosure”**

Before updating Splitter to Enclosure,Remove complete data of respective table

* Splitter in SMP, SAM-ADA-SPL-641 and Next Seq. (SMP & SPL name should) and Type is “CORNING\_PLC\_SPLITTER\_1:8 or 1:4”
* Splitter in CAP, SAM-ADA-SPL-641 and Next Seq. (SSS & SPL name should except FSL Feeding) and Type is “TYCO\_PLC\_SPLITTER\_1:8 or 1:4”)
* Splitter in FJL: - Type is “TYCO\_PLC\_SPLITTER\_1:4 or 1:8”
  + In case FJL is planned, SAM-ADA-SPL-101 and Next Seq.
  + In Case FJL in Existing, Splitter should start with Sequence after Existing Splitter Number

In LOW and MEDIUM Demand: -

No. of Splitter required in FJL = (No. of SMPs + No. of 1:8 Splitters required for CAP) / 4

In High Demand: -

No. of Splitter required in FJL = (No. of SMPs) / 8

**Step 5: - Update PB as per Updated Design**

* Need to Update Designed SLs and MPS Details
* Need to match MPT & FJL Location in PB As per Equipment Location in Design
* Incase of DJL Feeding, need to update Fibre Range

**Step 6: - Update Field Data as per FIR & ESRI**

6.1: - Cases of Pit

FIR details for pit are categorized into 3. Refer them in detail below

* No Change required
* Change recommended
* Not Inspected

6.1.1: - No Change required

Pit which did not require any Civil Work in Field are marked as “No change Required” in FIR by Field Team

Changes required in S18: -

* Update Actual Pit Size if any mismatch
* Update Actual Material if any mismatch

6.1.2: - Change Recommended

Pit which requires Civil Work in Field are marked as “change Recommended” in FIR by Field Team. There are lot of cases involved in Change Recommended Category

6.1.2.a: - Does Not Exist

Pit which are not available in Filed but Pit available in S18

Changes required in S18: -

* Draw Parallel Route between Adjust Pits with T-IDs with Object Status is “Inservice”, and Owner is “Telstra” bypassing Does not Exist pit
* Update Remediation to Pit as “DOES NOT EXIST” and remove Project Details
* Update Project Codes for Route & Duct “N2P-NEW”

6.1.2.b: - Newly Discovered Existing Pit (Blue Color Pit in ESRI)

Pit found in Field which is not captured in S18

Changes required in S18: -

* Place Pit with T-IDs as per ESRI over Existing Route by Splitting
* Update Route ID and Duct ID with adding “-1” & “-2” along Ref ID. 18 Zero’s at the End of Existing Route and Duct
* Object Status is “INSERVICE”, and Owner is “Telstra”
* Update Project Code for Pit is “N2P-NEW” and for Route & Duct is “N2P-NEW”

6.1.2.c: - New Pit over Existing Route (Blue Color Pit in ESRI)

New Planned Pit over Existing Route if any Required

Changes required in S18: -

* Place Pit with T-IDs as per ESRI over Existing Route by Splitting
* Update Route ID and Duct ID with adding “-1” & “-2” along Ref ID. 18 Zero’s at the End of Existing Route and Duct
* Object Status is “Planned”, and Owner is “Telstra”
* Update Project Codes for Pit, Route & Duct “N2P-NEW”

6.1.2.d: - Damage Pit or Physical Obstruction

If any Crakes or wall breaks in Pit are needed to consider as damaged Pits

Changes required in S18: -

* Check for Field Photos to Confirm Damage is there or not
* For pit Size below 5, Update Remediation as “Upgrade to 5 pit” and Remed. Descri. is “Damage Pit” and Surface Type as per Field Photos
* For pit Size is 5 or above, Update Remediation as “Replace Like for Like” and Remed. Descri. is “Damage Pit” and Surface Type as per Field Photos

Note: When We have Updated any Remediation to Pit, all three fields need to update are Remediation, Description & Surface Type should not miss any

6.1.2.e: - Damage Lids\Broken Lids

If any Crakes on Lids are needed to consider as damaged Lids

Changes required in S18: -

* Update Remediation as “Replace Lids” and Remed. Descri. is “Damage lid” and Surface Type as per Field Photos

6.1.2.f: - Raise Pit or Buried Pit

When Pits is below Surface level are needed to consider as Buried Pit

Changes required in S18: -

**Case1:** Pit Located with New Equipment below Ground Level

**Solution: -** Can proceed further with anyone of below

1. Check Possibility to Equipment Movement

or

1. Raise (Plastic) => 5 \ Upgrade < 5

**Case2:** Pit Located with Exist Equipment below Ground Level

**Solution: -** Need to proceed with below Options

1. Raise (Plastic) => 5 \ Upgrade < 5 And

B) No need to Relocate Planned Equipment if any

**For Case 1 & 2 Remediation Desc.:** i) Upgrade required to raise pit to bring it to surface level (if Upgrade)

ii) Raise pit to bring it to surface level (if raised)

**Case3:** Pit located without Equipment below Ground Level

**Solution: -** No change Required irrespective of Cable Hauling through it

**Case4:** Completely Buried (Under something or unable to locate)

**Solution: -** Need to proceed with below Options

1. Raise (Plastic) => 5 \ Upgrade < 5

and

1. No new planned Device are place if any, need to relocate

**Remediation Desc.:** Locate and Raise pit during construction

6.1.2.g: - Pit upgrade for Device or Conduit

When Pits upgrade for Device or Conduit to satisfy NBN Rules are needed to consider as Standard pit for Device or Conduit

Changes required in S18: -

* Update Remediation as “Upgrade to x-pit” and Remed. Descri. is “Standard Pit Upgrade for Device (Equipment) or Conduit” and Surface Type as per Field Photos

6.1.2.h: - Pit Located in Driveway or Unsafe

Changes required in S18: -

* Don’t plan any Equipment in Pit which located in Driveway
* Move Planned Equipment to Adjust pit which fits

6.1.2.i: - Pit locate Significantly different location

If Pit captured in S18 location is mismatch pit location in Field

Changes required in S18: -

* Move Pit to its original location as per Field (Refer Google Photos) and its supporting Network

6.1.2.j: - Pit No Longer Required

Changes required in S18: -

* Check for Alternative Route to haul the Cable
* If no alternative available, raise query initially when FSL, SSS & FSD cables are Hauling
* If Only SDS hauling, Then We can use it.

6.1.2.k: - Pit in Private Property

Changes required in S18: -

* If FSD, FSL & SSS hauling through Pit in Private Property, Pit need to Update Remediation as considering it as Buried Pit
* If only SDS and SSS which Connect CAP cables Hauling than No Change Requires

6.1.3: - Not inspected

Changes required in S18: -

* If FSD, FSL & SSS hauling through not inspected Pit, Pit need to Update Remediation as considering it as Buried Pit
* If only SDS and SSS which Connect CAP cables Hauling than No Change Requires

6.2: - Cases of Duct

FIR details for duct are categorized into 3. Refer them in detail below

* No Change required
* Change recommended
* Not Inspected

6.2.1: - No Change required

Duct which did not require any Civil Work in Field are marked as “No change Required” in FIR by Field Team

Changes required in S18: -

* Update Actual Duct Size if any mismatch (Duct)
* Update Actual measure Length if any mismatch (Route)
* Update Max. Mandrel (Need to Check Field Photos)

6.2.2: - Change Recommended

Duct which requires Civil Work in Field are marked as “change Recommended” in FIR by Field Team. There are lot of cases involved in Change Recommended Category

6.2.2.a: - Does Not Exist

Duct which are not available in Filed but Pit available in S18

Changes required in S18: -

* Plan Parallel Route to Existing Route with NBN IDs with Object Status is “Planned”, and Owner is “NBN”
* Mark Lead-in as “N” for Street Network and “Y” for LIC (Duct Table)
* Make Ensure not to update Max. Mandrel

Note:

1. If Street Network, Planned Duct size should be 50mm
2. If SDU LIC, Planned Duct size should be 20mm
3. If MDU LIC, Planned Duct size should be 50mm
4. If Street Network in Road Crossing or DFN Cables, Planned Duct size should be 100mm

6.2.2.b: - Different Start/End Pits

Duct captured between incorrect pit which mismatching with field

Changes required in S18: -

* Capture Parallel Route to Existing Route between Correct Pits (Which mentioned in ESRI or FIR) with T-IDs with Object Status is “Inservice”, and Owner is “Telstra”
* Make Ensure to update Max. Mandrel

6.2.2.c: - Blocked Duct

If Ducts are filled with Mud or any other, then Duct consider as Blocked Duct

Changes required in S18: -

* Mark Remediation required as “Y”
* Update A & B End Length and Surface type as per Field Photos
* Make Ensure not to update Max. Mandrel

Note:

1. When We have marked Remediation as “Y” to Duct, all three fields need to update are A end, B end & Surface Type should not miss any
2. Update “0.1” if any End length is given as “0” in blocked duct

6.2.2.d: - Insufficient Mandrel

When Achieved Mandrel is not Sufficient to haul All Planned cables

Changes required in S18: -

* If mandrel is not sufficient for duct in which FSL, SSS and FSD Cable hauling. Plan Parallel Route to Existing Route with NBN IDs with Object Status is “Planned”, and Owner is “NBN”
* If mandrel is not sufficient for duct in which only SDS and SSS (MDU) Cable hauling. Update achieved mandrel and Haul Cable through it. No new duct required.

Note:

1. Need to check required Mandrel with achieved mandrel based on Mandrel Calculator for every Duct Except LIC
2. Always Achieved mandrel should be equal or greater than Required Mandrel

6.2.2.e: - No Longer Required

Changes required in S18: -

* Check for Alternative Route to haul the Cable
* If no alternative available, raise query initially when FSL, SSS & FSD cables are Hauling
* If Only SDS hauling, Then We can use it.

6.1.2.k: - Private Property

Changes required in S18: -

* If FSD, FSL & SSS hauling through Private Property, Check for Alternative if available if not, need to plan New Duct
* If only SDS and SSS which Connect CAP cables Hauling than No Change Requires

6.2.3: - Not inspected

Changes required in S18: -

* If FSD, FSL & SSS hauling through not inspected Duct, Plan New Duct
* If only SDS and SSS which Connect CAP cables Hauling than No Change Requires

**Step 7: - Cable Assignment (MI or QGIS Tools)**

* Remove completed data from the Cable Assignment Table
* Run Cable Assignment Tool then Assignment will be updated by Tool

**Step 8: - Validation Cable Assignment (QGIS Tool for Production & Excel for QC\QA)**

**Step 9: - Check Mandrel Tool (QGIS Tool)**

If Achieved Mandrel is not sufficient then We need to plan new ducts.

**Step 10: - Update Ref ID.**

Update Ref. ID for all 9 Series Assets in Pits, Ducts & Route which covered under N2P Scope with Next Sequence NBN ID

**Step 11: - Updating Tools**

* S18 Spec.
* Check for Duplicates (MI Tool)
* Update Project Details for cable and Equipment
* Update Project Details P & P
* Update Spec. for Cable & Equipment
* Update Spec. for P & P
* Update Spec. for SL and Boundary
* Update Network Key (MI Tool)

**Step 12: - Validate Route Table (QGIS Tool)**

**Step 13: - Validate Project Codes (QGIS Tool)**

**Step 14: - Validate Planned Data (QGIS Tool)**

**Step 15: - Update Cable Length Tool (QGIS Tool)**

**Step 16 (Only for Ventia): - ESRI Tool**

Need to Run Till we get “0 (Zero)” Valid Errors

**Step 17: - Update SJR**

Guidelines to update SJR Point Wise: -

* Update Joint Name (No. of Column = No. of Fibre in CableIN)
* Update In-Cable (No. of Column = No. of Fibre in CableIN)
* Update INcable Fibre
* Update Connectivity with Out Cable
* Update OutCable Fibre
* Update Idle Fibre as “X”

At SMP:

1. Joint name is SPL Name
2. Always 8 or 4 columns need to Show for SMP (Based on Splitter)
3. Out port should be from 1 to 4/8 not Duplicates allowed
4. Same In-cable and Seg & Fibre is “1” for All Ports
5. Update “X” for Ports which don’t have Out Cables i.e., Fibre2, Seg2 & cable2

At CAP:

1. Joint name is SPL Name
2. Always No. of Columns depend on No. of SLs feeding from CAP (No extra columns need at CAP)
3. Update “X” for CAP in Outports
4. Same In-cable and Seg & Fibre is “1” for All Ports

At BJL:

1. Joint name is BJL
2. Need to Drop 1st 4 Fibre at 1st BJL even though 4 Fibres do not use
3. Need to Carry Forward 5th to 12th Fibre to 2nd BJL in case of Cascade
4. Fibre of CableIN need to Splice with same Fibre in CableOUT in Cascade
5. Need to Show all Idle Fibre in CableIN and CableOUT
6. Update “X” in Outport’s column
7. Always Show SMP Splice First and then CAP

For Splitter At FJL:

1. Joint Name is Splitter name (SPL)
2. Always 8 or 4 columns need to Show for SMP (Based on Splitter)
3. Out port should be from 1 to 4/8 not Duplicates allowed
4. Need to Show Splice in Fibres which are Connecting to End User. No Need Show to Fibres drop at BJL
5. Always Show SMP Splice First and then CAP (Based on BJL Splice)
6. Always Connect Direct SMP First and then BJL Splice
7. Same In-cable and Seg & Fibre is “Respective Fibre” for All Ports (In case 12F\72F, Fibre need to Change for every 4/8 Ports based on Splitter Ratio)
8. Update “X” for Ports which don’t have Out Cables i.e., Fibre2, Seg2 & cable2

At FJL:

1. Joint Name is FJL name
2. Show all Direct Splicing
3. Need to Show all Idle Fibre in CableIN and CableOUT
4. Update “X” in Outport’s column

Note:

1. If FJL is Planned, Splitter name starts with “101”
2. If FJL is Inservice, Splitter name starts with Next Sequence of Existing Splitter Number
3. In each FJL, we have use max. 7, 6 & 3 Splitters including Existing if any in Low, Medium & High Demands Respectively
4. if we require 7th New Splitter in Inservice FJL then We can Use Existing Splitter instead of Planned 7th SPL

**Step 18: - Update AWR with Tools**

**Outputs:**

* Update S18
* FIR
* SLD (AutoCAD)
* GML (on Request)
* Checklists