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Close the gap in network inventory to improve customer service

Accelerating reconciliation process time by up to 60%

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DSPs' network inventory systems are often 20-30% out of sync with the physical and logical state of the network

An inventory of assets and services is the cornerstone for any digital service provider (DSP). Yet, DSPs face several challenges in managing the completeness and accuracy of inventory data.

Root causes resulting in inventory data issues

- Manual and time-consuming procedures for updating & maintaining OSS Inventory. For example:
  - Manual updates from field engineers resulting in errors
  - Provisioning & service delivery teams using quick-fix and workaround methods on network side to satisfy customer, but never reconcile it on OSS Inventory
- Mergers and acquisitions (M&A) resulting in multiple sources of truth
- DSPs maintaining inventory data in non-digital format

Major impacts on service fulfilment, assurance and billing processes

Increased inflow of calls by field technicians

Frequent provisioning delays and order fallouts

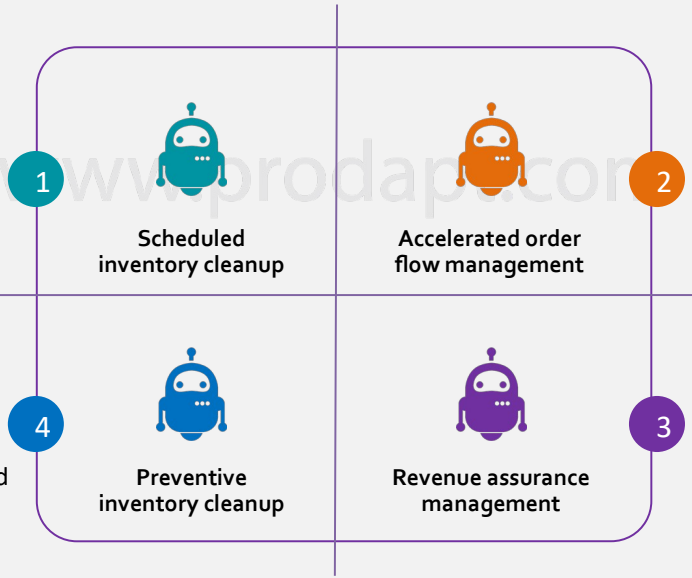
Increased service truck rolls

Billing mismatches - revenue leakage & impact on CSAT

Manual data reconciliation projects are proving to be ineffective as these are labor intensive, time-consuming and cannot handle network environments that are rapidly changing. An **RPA-based automated inventory reconciliation framework** can help DSPs accelerate their data integrity programs.

Key elements to create an effective RPA-based automated inventory reconciliation framework

RPA is a perfect choice for a fast-paced implementation of inventory reconciliation process and automating the associated workflow



Discrepancy identification, categorization and rectification

Bot performs auto identification & calibration of discrepancies between OSS inventory & network

1

Scheduled inventory cleanup

2

Accelerated order flow management

Real-time inventory gap analysis to address data integrity issues

Gap analysis bot to reduce service order fallouts due to network inventory issues

Integrating bot in field service updates workflow to capture frequent network changes

Seamless provisioning, activation and inventory update by integrating bot in field service

4

Preventive inventory cleanup

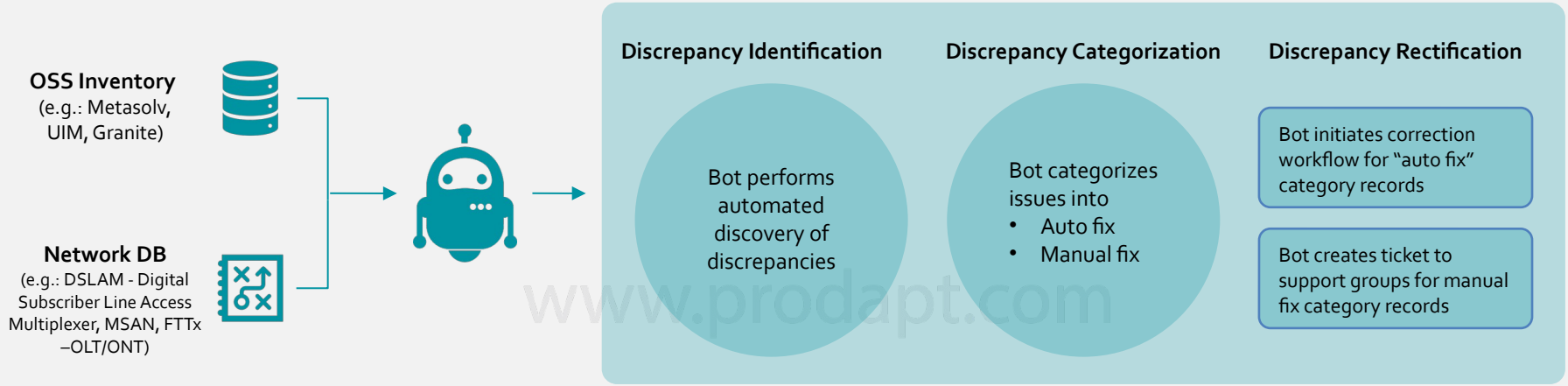
Revenue assurance management

3

Automated bot-based inventory record cleanup for billing discrepancy issues

RPA bot to validate DBB (disconnect but billing) records to reconcile inventory records

RPA bot-based data discrepancy identification, categorization & rectification process – Scheduled inventory cleanup



Auto-fix category: Inventory record issues that doesn't require validation from SMEs (e.g. service delivery, assurance, fulfillment executives). Such record issues can be directly rectified by RPA Bots.

Typically, 30-40% record issues fall into auto fix category - potential area for bots to automate reconciliation process!

Benefits realized by a leading DSP in North America leveraging inventory reconciliation bot

Improved reconciliation time by up to 60% ● **Automated 43% of DSLAM inventory discrepancy rectification**

Sample inventory reconciliation activities performed by inventory reconciliation bot

Sample inventory reconciliation activities

Monitoring/clean up of inventory data

Compare inventory data available in OSS inventory application (E.g. Metasolv, UIM, Granite, etc.) with inventory data available in DSLAMs

Pin Number/Service Active Vs Inactive Validations

Validate whether pin number and service active/inactive status is matching between OSS inventory and DSLAM data

Hierarchy Validations – Port /Slot/Shelf

Align interface and hierarchy definitions by validating port – slot – shelf data represented in OSS inventory and DSLAM are consistent

Circuit Nomenclature Validations

Resolve discrepancies between billing and logical inventory on nomenclature and status

Good, Bad and Blocked Pin Validations

Validate whether pin number available in OSS inventory is consistent with DSLAM pin status

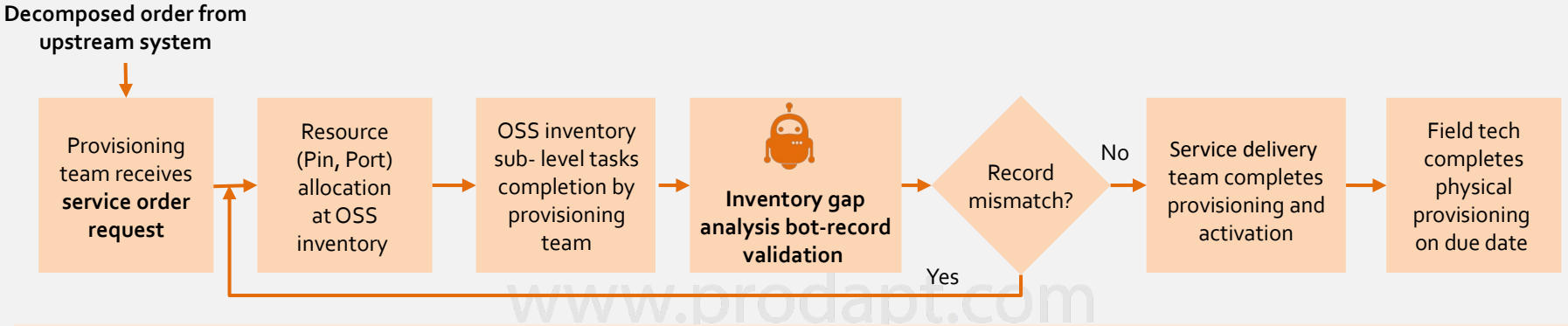
Circuit Inventory Standardizations

Ensure the necessary suffixes and prefixes are added in timely manner to circuit details in inventory systems

Inventory Optimization Validations

Validate services subscribed to inventory assets allocated for customers

Implementing real-time inventory gap analysis bot in order-to-activate process – Accelerated order flow management



In the absence of a bot if there is inventory record mismatch issue, it will be only found by field technician on due date, leading to service activation delay and order fallouts!

Gap analysis bot connects to the network management system and validates whether the resource allocated at OSS inventory is available for executing the order

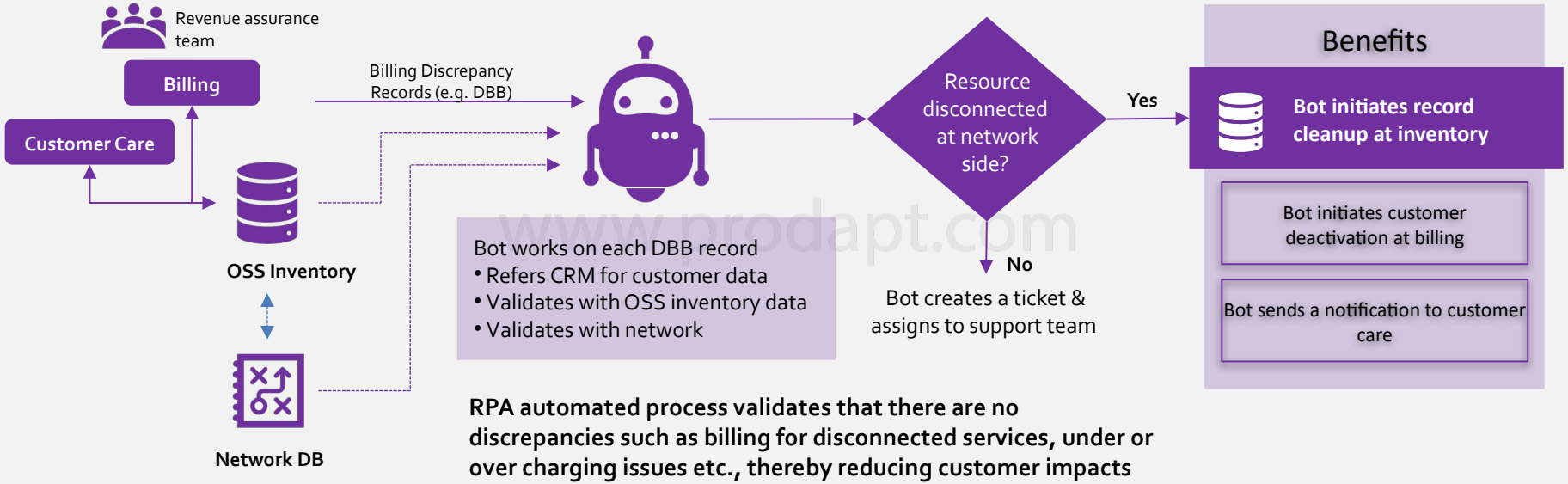
- When the requested resource is available, bot simply triggers automated provisioning flow
- When the requested resource is unavailable due to inventory record mismatch bot does the following
  - Notifies provisioning team for reassignment
  - Initiates discrepancy categorization and rectification workflow on OSS inventory

Benefits realized by a leading DSP in North America, implementing inventory gap analysis bot:

106,348 record issues identified ● 21% order fallouts prevented

Automated bot-based inventory record cleanup for billing discrepancy issues – Revenue assurance management

Implementing a customized bot to handle the billing discrepancy (e.g.) DBB (disconnected but billing) workflow helps DSPs improve inventory data integrity and cost savings.



RPA automated process validates that there are no discrepancies such as billing for disconnected services, under or over charging issues etc., thereby reducing customer impacts

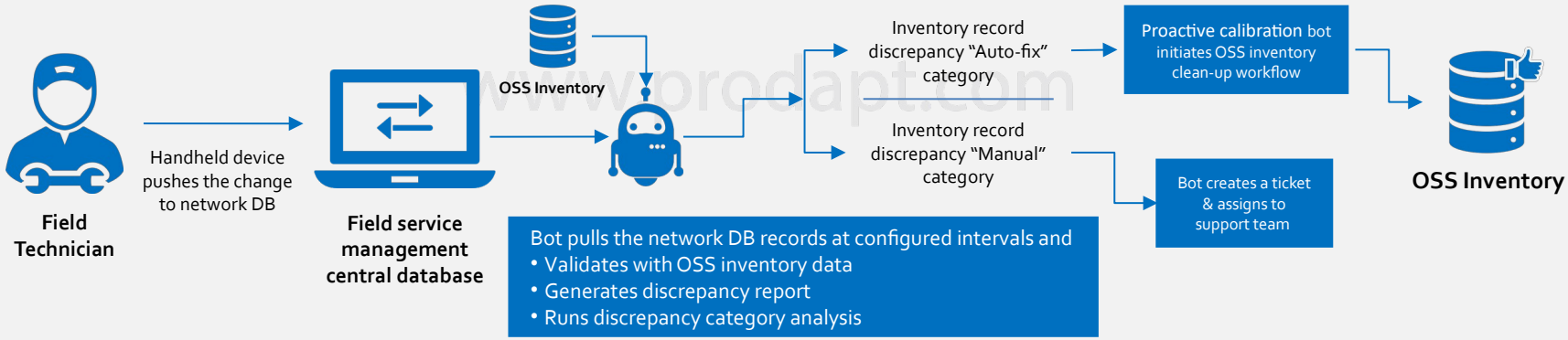
Benefit realized by a leading DSP in North America:

$2.7 million cost savings in disconnect issues alone

Integrating bot in field service updates workflow to capture frequent network changes – Preventive inventory cleanup

Traditionally, field technicians work with customer service representatives (CSRs) to update the network side changes and in parallel work with provisioning & activation team for order fulfillment activities. These manual activities are time-consuming, error-prone and it takes several hours/days to see the changes reflected in the OSS Inventory. Often, these network changes never gets updated in inventory management systems causing data integrity issues.

Below work-flow shows a customized bot enabling automated network inventory reconciliation procedure. Further, this bot enables near real-time updates of network changes by field technician onto the OSS Inventory.



Up to 80% of record issues caused in manual field service updates can be prevented by implementing this bot-based approach

In conclusion…

Inventory data accuracy and integrity has critical impact on DSP's operational excellence. Majority of DSPs feel that 20-30% of their inventory data is out-of-sync with the "As-Is" state of network.

While most DSPs are still using ad-hoc manual reconciliation procedures to address this crucial issue, many have recognized the ***need for an automated approach for data integrity management***.

Highlights of the bot-based inventory data integrity solution:

- Enables DSPs to move from manual/ad hoc process to an automated reactive, proactive & preventive approach
- Integration of bots in:
  - Automated inventory reconciliation process
  - Real-time gap analysis during order-to-activate workflow
  - Billing discrepancy (DBB issues) workflow
  - Field service updates workflow

Benefits:

- Error-free provisioning
- Faster service design & activation
- Recover stranded resources - reduce capex
- Better revenue assurance
- Improved customer experience

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