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Self-healing tool is the answer for order fulfilment woes
Achieve automated resolution of order fallout issues and recurring requests.

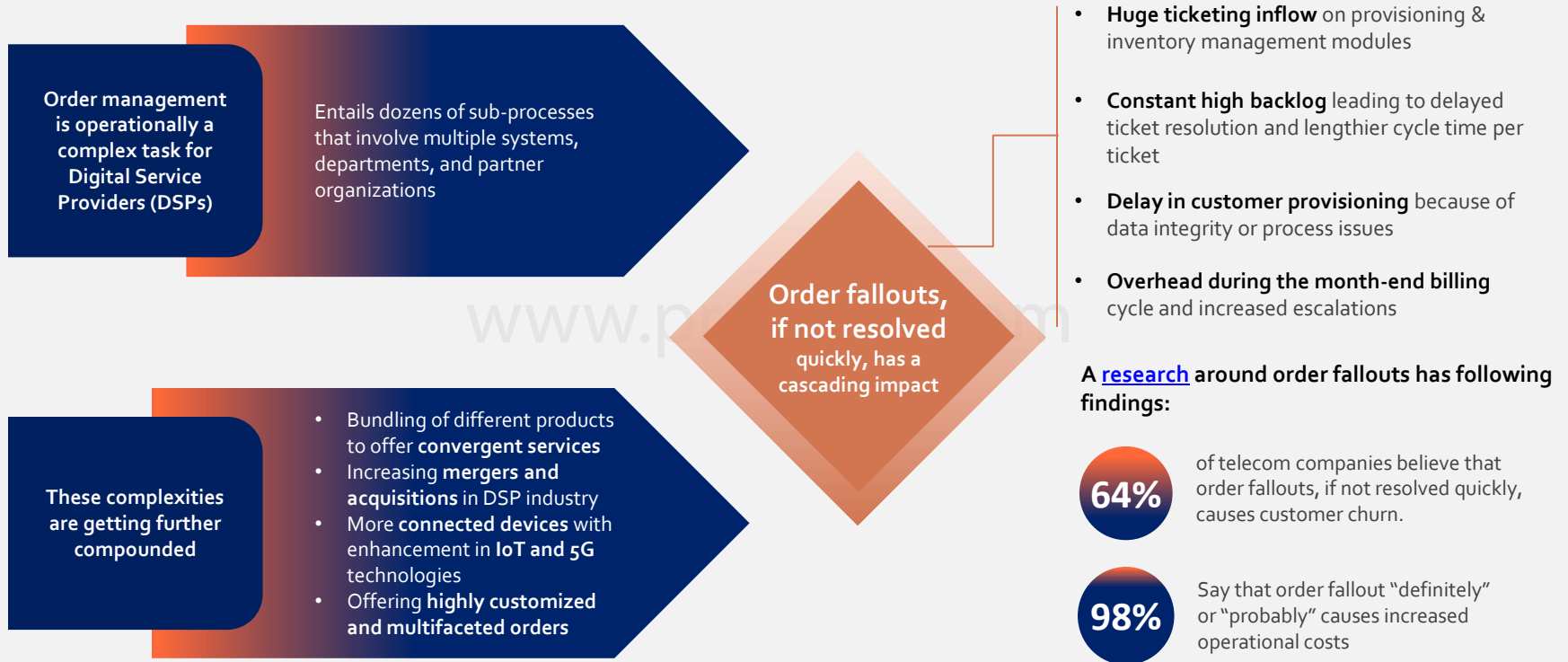
Credits

Ravindran N

Sumit Thakur

Today, most DSPs face common challenge of meeting the order fulfillment due dates

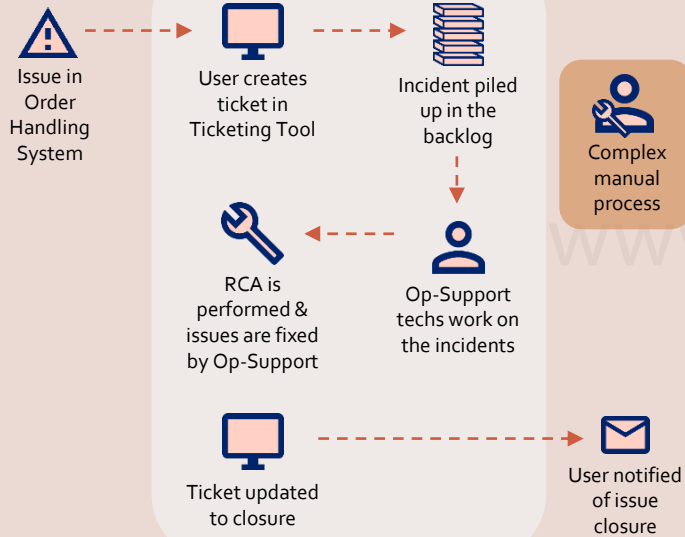
Any delay in order handling due to fallouts can lead to significant customer churn and revenue loss



Each order fallout in the order orchestration life-cycle leads to revenue loss for the DSP and hence a swift resolution of the fallouts is a prime necessity.

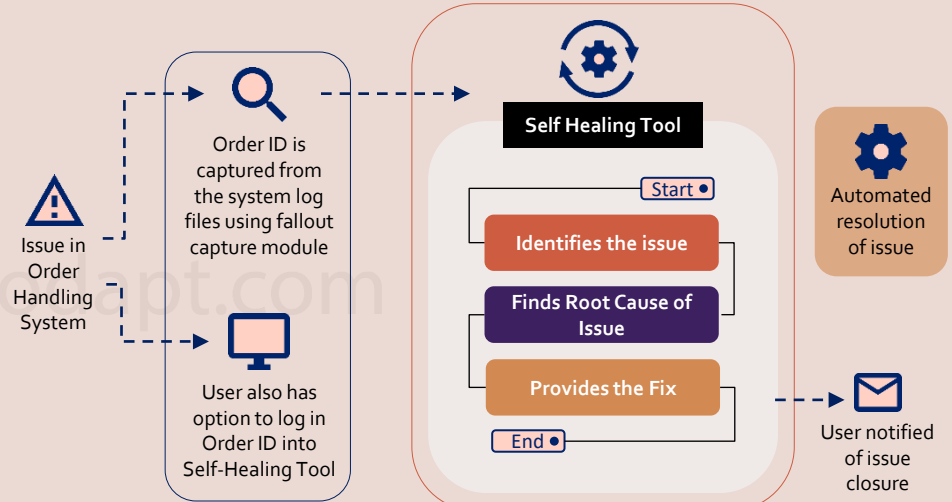
Creating a “Self-Healing Tool” to resolve order fallout can help DSPs to derive major business benefits

Traditional approach for ticket resolution



Leads to delay in ticket resolution, increasing the customer churn and revenue loss.

Proposed approach using “Self-Healing Tool”



Improve Order to Activate timelines

Reduce overheads & costs

Improve Overall customer satisfaction

Significantly reduce ticket inflow

Improve ticket Resolution Rate

This insight details proposed architecture of “Self-Healing Tool” & deep dives into core elements of the tool, highlighting key recommendations to effectively build them.

Proposed architecture diagram of "Self-Healing Tool"

- Achieve automated resolution of order fallout issues & recurring requests

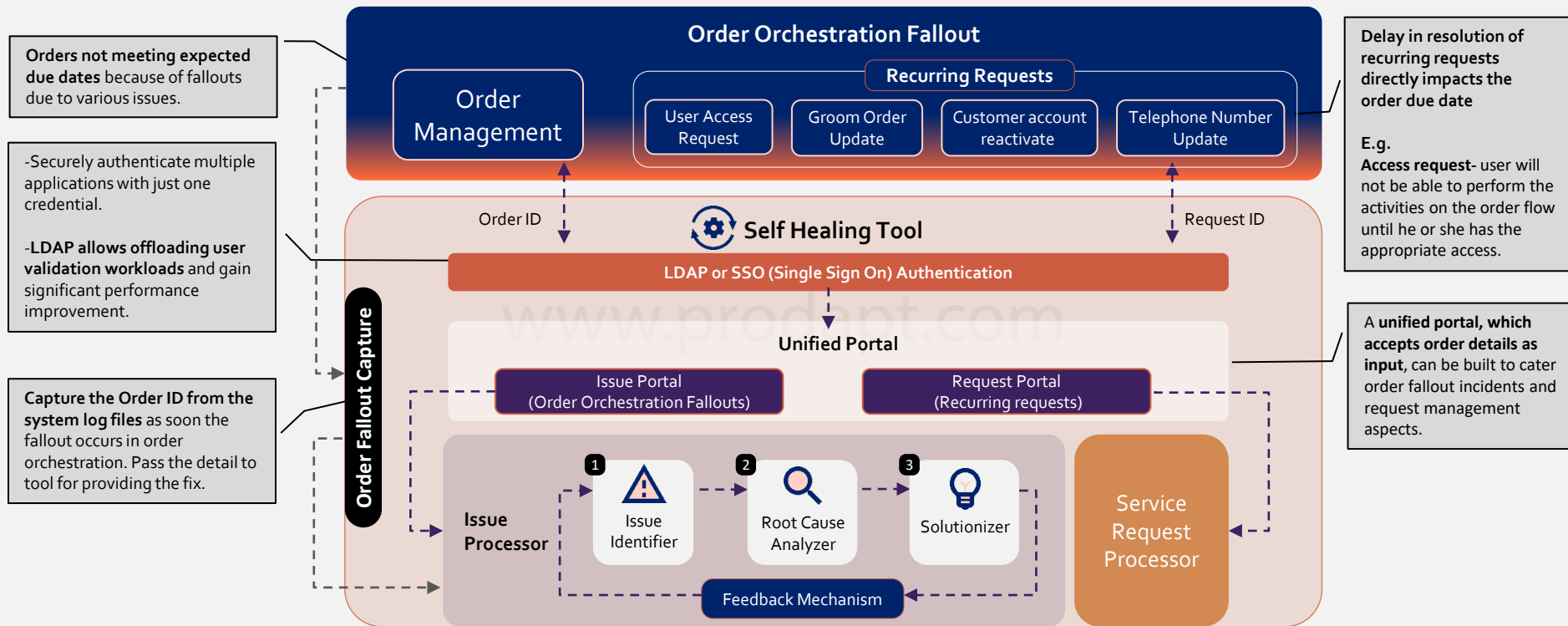


Fig: Proposed architecture diagram of "Self-Healing Tool"

Issue Processor is the core element of the framework . Further slides deep dive into issue processor & showcases how each of its sub-processes can be built to give automated order fallout resolution.

Issue Identifier - Scan different modules in order processing to identify where is the order failing

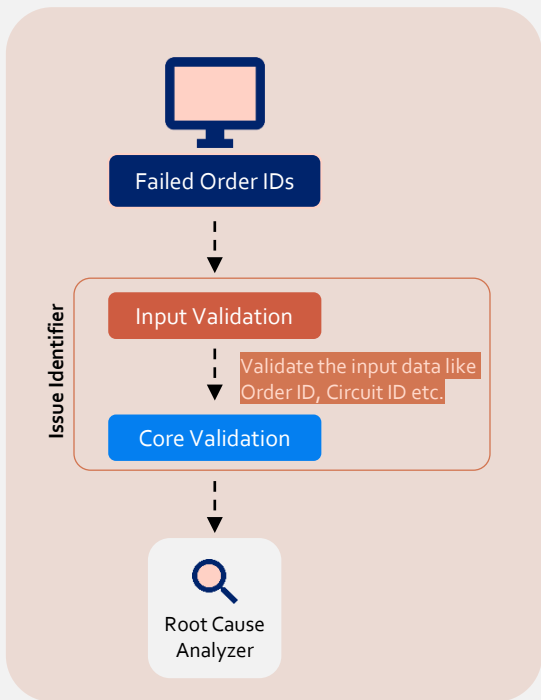


Fig: Process Flow for Issue Identifier

Create validation rules to scan different modules in order processing and find where the order is failing.

Tool should be able to capture following:

- Module in which the order fails
- Specific Query leading to the fallout
- Error Number
- Error Message



! The circuits for this service request are not complete. Please complete (or reverse if the order has been cancelled) the required engineering before completing this task.

The DD on row # 1 is violating the constraint.

The order number is 7607528.
The Circuit ID is 60/FEDO/368945/160/PUA /FED.

OK

Fig: Sample of error message obtained in GUI of service delivery user

The query points to the table which is failing.

Error Number	Module	Error Message	Query
370	Access Services and Provisioning	The circuits for this service request are not complete. Please complete (or reverse if the order has been cancelled) the required engineering before completing this task.	SELECT COUNT (*) FROM asap.circuit_position cp, asap.service_request_circuit src WHERE (src.circuit_design_id = cp.circuit_design_id_3) AND (src.document_number = al_document_number)

Fig: Sample of error details obtained from Issue Identifier

Root Cause Analyzer - Run validation logics across several defined cases to identify why is the order failing

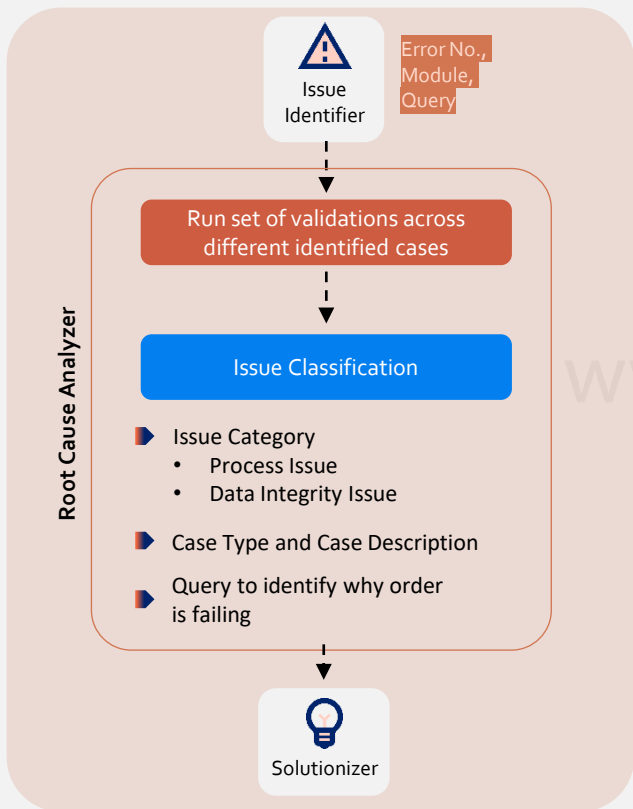


Fig: Process flow for Root Cause Analyzer

RCA should hold **inventory of logics to identify the issue type**. Identify all the plausible scenarios for a given issue.

Order Orchestration Fallout

Design Tasks missing

Design task not processed for non-cancelled orders

Data Integrity issue on the port assignment

.....

Order Due Date

Sample plausible scenarios for a given issue

- Categorize & embed scenarios into the RCA config table for easy classification and solutioning
- Develop logics based upon the database used – (Oracle, MySQL, Mongo or Hive)
- Define **Case Type & Description** in the config table to pass this info to the Solutionizer for providing logical solutions
- Run multiple validation checks based on the **RCA config table**.

Error Number	Issue Category	Module	Case Type	Case Description	Query
370	Process	Access Services and Provisioning	1	DESIGN Tasks missing	SELECT COUNT (*) FROM task WHERE document_number = a1_doc_nbr AND task_type IN ('DESIGN', 'DLRD', 'RID', 'PCONDES', 'VCONDES')
370	Process	Access Services and Provisioning	2	Parent connection on the order has other connections riding it, which are still in service.	SELECT COUNT (*) FROM asap.service_request_circuit, asap.circuit_position WHERE (asap.service_request_circuit.circuit_design_id = asap.circuit_position.circuit_design_id) AND ((asap.service_request_circuit.document_number = a1_document_number) AND (asap.service_request_circuit.circuit_design_id = asap.circuit_position.circuit_design_id) AND (asap.circuit_position.document_number = a1_document_number))
370	Data Integrity	Access Services and Provisioning	1	Data integrity issue on the port assignments of the connections on the order	SELECT COUNT (*) FROM service_request_circuit src, serv_req_sr, port_address pa WHERE src.document_number = a1_doc_nbr AND src.document_number = sr.document_number AND pa.circuit_design_id = src.circuit_design_id AND pa.port_addr_status IN (2, 4) AND pa.document_number IS NULL AND NVL (sr.supplement_type, 0) <> '1'
370	Data Integrity	Access Services and Provisioning	2	Data integrity issue on previous order	SELECT COUNT (*) FROM service_request_circuit src1, service_request_circuit src2 WHERE src1.document_number = a1_doc_nbr AND src2.circuit_status NOT IN ('6') AND src1.document_number <> src2.document_number AND src1.circuit_design_id = src2.circuit_design_id

This query helps to identify why the order is failing

Fig: Sample inventory of logics in RCA config table for error number 370

Solutionizer - Provide an automated fix to the issue leveraging pre-defined customizable scripts embedded in tool

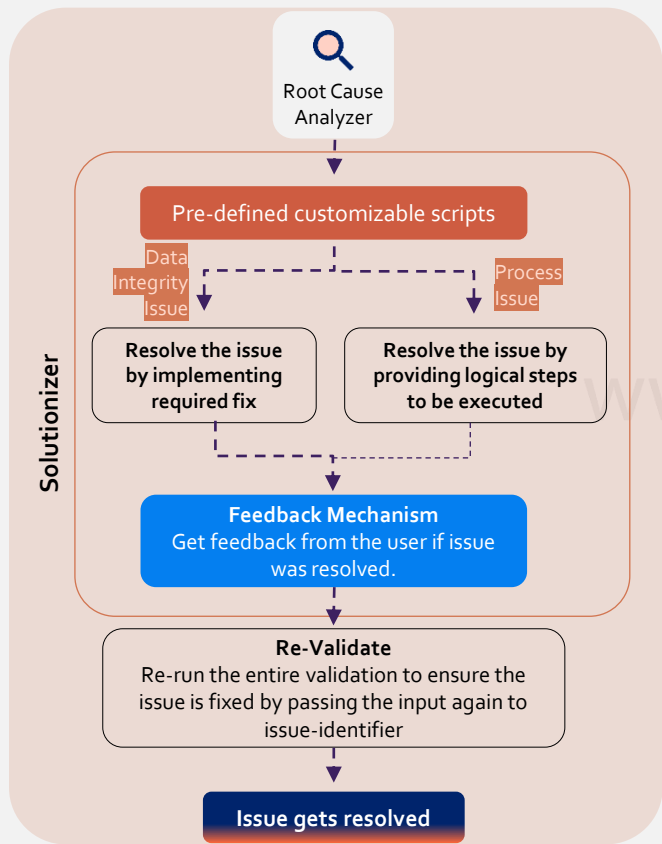


Fig: Process flow for Solutionizer

Solutionizer executes required fix to resolve data integrity issues

Logical steps provided by Solutionizer should be executed by user to resolve process issue

The feedback mechanism provides insights into the additional missing scenarios and these could be added into the RCA config table with further research on each scenario



Fig: Sample snapshots of fix for Data Integrity issue

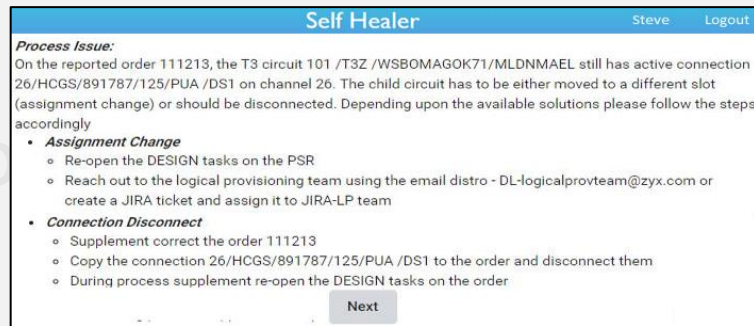


Fig: Sample snapshots of fix for Process issue

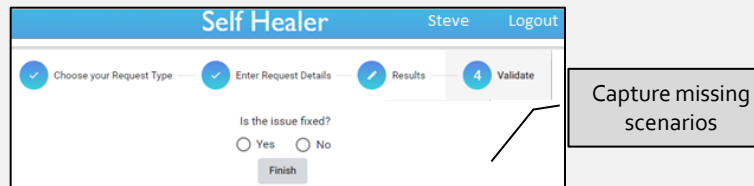


Fig: Sample snapshots feedback mechanism

Business & operational benefits for a leading Digital Service Provider (DSP) in North America

For one of the major product line, **75%** of customer's fulfillment orders were not meeting the due dates due to order fallouts. Majority of these fallouts were because of process issues, data integrity issues and migration issues.

Leveraging **Self-Healing tool** can help the DSP to **provide automated resolution to these order fallout issues** and achieve major business benefits.

Key Benefits



Incident resolution time can be improved by up to **98%**

- ▶ Avg Support Resolution time per ticket – **18 hours**
- ▶ Tool Resolution time per ticket **15 mins**



Ticket Inflow can be reduced by **40%**

Teams monthly inflow is projected to be reduced from 3000 tickets to 1800



Timely meeting the due dates can help in **increasing revenue & customer satisfaction**

Get in touch

USA

Prodapt North America, Inc.
Tualatin: 7565 SW Mohawk St.,
Phone: +1 503 636 3737

Dallas: 1333, Corporate Dr., Suite 101, Irving
Phone: +1 972 201 9009

New York: 1 Bridge Street, Irvington
Phone: +1 646 403 8161

CANADA

Prodapt Canada, Inc.
Vancouver: 777, Hornby Street,
Suite 600, BC V6Z 1S4
Phone: +1 503 210 0107

PANAMA

Prodapt Panama, Inc.
Panama Pacifico: Suite No 206, Building 3815
Phone: +1 503 636 3737

UK

Prodapt (UK) Limited
Reading: Davidson House,
The Forbury, RG1 3EU
Phone: +44 (0) 11 8900 1068

IRELAND

Prodapt Ireland Limited
Dublin: 31-36 Ormond Quay Upper
Phone: +44 (0) 11 8900 1068

EUROPE

**Prodapt Solutions Europe &
Prodapt Consulting B.V.**
Rijswijk: De Bruyn Kopsstraat 14
Phone: +31 (0) 70 4140722

Prodapt Germany GmbH
München: Briener Straße, 80333
Phone: +31 (0) 70 4140722

Prodapt Switzerland GmbH
Zürich: Mühlebachstrasse 54,
8008 Zürich

Prodapt Austria GmbH
Vienna: Cityport 11, Simmeringer
Hauptstraße 24, 1110
Phone: +31 (0) 70 4140722

SOUTH AFRICA

Prodapt SA (Pty) Ltd.
Johannesburg: No. 3,
3rd Avenue, Rivonia
Phone: +27 (0) 11 259 4000

INDIA

Prodapt Solutions Pvt. Ltd.
Chennai: Prince Infocity II, OMR
Phone: +91 44 4903 3000

"Chennai One" SEZ, Thoraipakkam
Phone: +91 44 4230 2300

IIT Madras Research Park II,
3rd floor, Kanagam Road, Taramani
Phone: +91 44 4903 3020

Bangalore: "CareerNet Campus"
2nd floor, No. 53, Devarabisana Halli,
Phone: +91 80 4655 7008

THANK YOU!