

From Data to Action

Enhancing Reporting Efficiency with
FME Automation via Survey Webhooks

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The value of Intelligent Transport Systems Network (ITSN) Project

- Applied technology for transport management and safety on roads
- ITS equipment includes traffic signals, message signs
- ITSN project
- ITSN spatial data - the locations of all network devices along the State Highways

WAKA KOTAHI
NZ TRANSPORT AGENCY

Audit History Export Data

POC - ITSN Intelligent Traffic Systems Network Reporting WebApp

Find address or place

Legend

ITS Network Equipment Survey

device_type

- Router
- Switch-Edge
- Firewall
- Switch-Core
- Switch-Distribution
- Bridge
- [confirm entry]
- Switch-leaf
- Switch-spine
- APIC
- Other

200km

loading...

ITS Network Equipment Survey

Options Filter by map extent Zoom to Clear selection Refresh

objectid	GlobalID	Device_ID	Scope	provision_status	network_type	topology	resilience_rating	location_name	hostname	Node_A
972	6759edec-248e-4feb-80aa-79bada6305ed	ITS-AUK-RT-0073	Yes	active	WAN	lite site	Bronze	8 Fred Thomas Drive (ESM3B)	FN-ESM3B-ESM3B	

1907 features 0 selected

ITSN Equipment Survey

- Used by ITS Network Audit team.
- Aims to update records and report the details of new equipment.
- Lite Site Survey & Roadside Survey.
- field data is collected either via Survey123 Mobile App or a Web Experience App.

ArcGIS Survey123

Lite Site Survey

Use this for single router sites.
eg. Using ADSL/Cellular connections 2

Cabinet ID

Is Cabinet ID correct *

Yes
 No

Device Type

Location *

Contractor *

Lite Site Survey

Audit Date *

Date Time

Technician Name *

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Photos

Take photos of the location and surroundings *
Try to include all equipment, antennae and signs/cameras at site

ArcGIS Survey123

Road String Survey

Point

36°45'S 174°44'E

Cabinet_ID

ITS-AUK-0242

Is the Cabinet ID correct *

Yes
 No

Road String (Waka Kotahi Fibre Connected Sites)

General Questions

Images

Take photos of the location and surroundings *
Try to include all equipment, antennae and signs/cameras at site

Cabinet with surrounds including surface top of Cabinet *

Inside Front of cabinet *

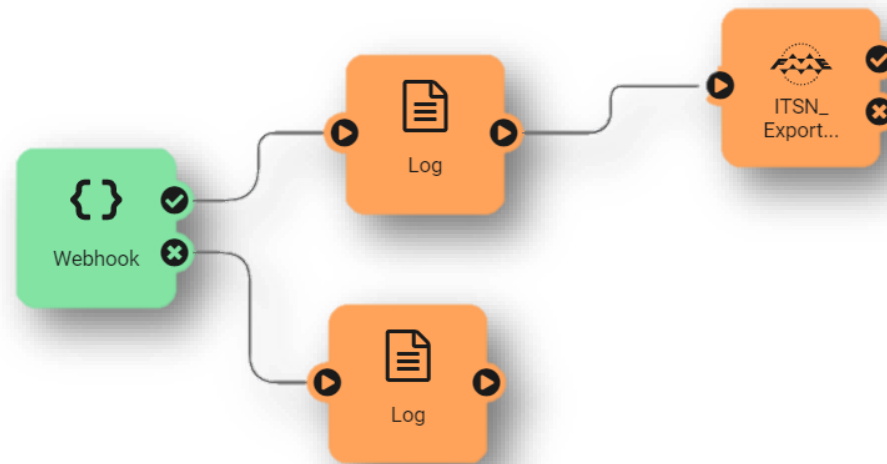
Inside Back of cabinet *

ITSN Survey Attachment Export Automation

To support the ITSN reporting routine by sending the new equipment photos

On-demand Webhook Trigger

New submitted & existing edited ITSN survey form's attributes



Automation Actions

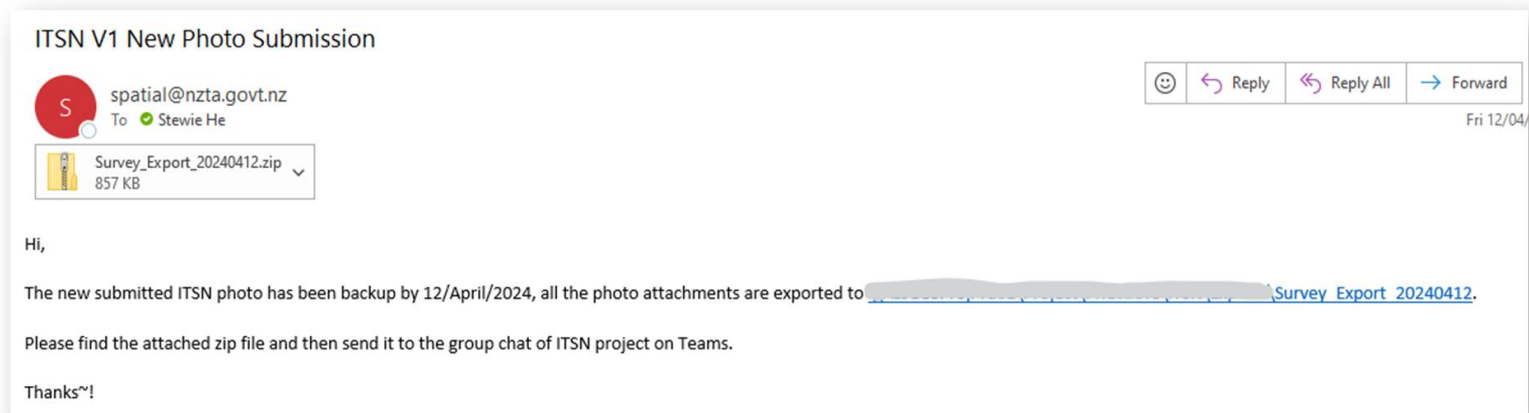
parses webhook JSON messages and runs the workspace

ITSN Survey Attachment Export Workspace

Reader
reads the JSON
attributes from
the survey
webhook

Data Process
filters the JSON
keys, pulls
down ITSN
attachments
and converts to
image files

**Writer &
Emailer**
extracts and
compresses the
files as an email
attachment for a
final check



Benefits & Challenges

- Comparison
 - Old procedures consumed nearly a whole day
 - Last success process only took 5 minutes
- Near real time data process
 - Increases reporting efficiency
 - Strengthens stakeholder relationship
 - Saves a significant amount of time and effort



Benefits & Challenges

- Data Loss Risk
 - GlobalID in file name
 - A data backup approach as a SOP
- Absenteeism
 - Emailer is available to be redirected via a user parameter,
 - The mail is bcc'd to the team mailbox
- Limitations in the business requirements
 - A manual photo review is still required
 - A health check for overrunning
- Further developments & improvements



Thank you for listening | Ngā mihi o te tau hou

Reference:

Sanderson, Liz. (2024). *Push Data from ArcGIS Survey123 to an Application in Real-time with Webhooks*, <https://support.safe.com/hc/en-us/articles/25407775273101-Push-Data-from-ArcGIS-Survey123-to-an-Application-in-Real-time-with-Webhooks>

Q&A