Case Study

Automating Safe Dig Packs, 2015

NDL and Balfour Beatty Utility Solutions

Process	The production of information packs on existing utilities to ensure safe digging
Users	Office staff
Hardware	N/A
Technology	Application integration middleware
Software	NDL's awi^{SX} integration toolkit
Location	National

Business Problem:
The amount of time taken to collate of information about existing utilities from multiple online sources to produce the information packs necessary to ensure safe digging.

Business Solution:
Application integration software to automate much of the effort and dramatically reduce the time required to collate the information.

Background

Balfour Beatty Utility Solutions (BBUS) is one of the leading utility solutions providers in the UK. It works with the water, wastewater, gas and power industries, providing a range of services to maintain and manage essential utility assets.

Accurate mapping information is critical when digging holes to maintain utility supplies. Balfour Beatty Utility Solutions has selected awi^{SX} from NDL to automate the collection and provision of safe-dig map packs for its teams in the field, drawing on information from a variety of mapping applications. This has slashed the time it takes to produce the packs, cut production costs and significantly improved the accuracy of this vital information.

Pre-existing Business Process

BBUS digs over one million holes in UK roads each year as part of its work with utility providers. Ensuring its utility teams have reliable and timely access to accurate 'safe-dig' mapping information is critical. The consequences of failure to provide this information can result in delayed projects, disruption of services to members of the public and the potential to cause serious injury to an employee or member of the public.

Public utilities provide mapping systems which show power cables, water pipes and wastewater sewers, but producing, consolidating and transmitting map packs to remote teams is a time consuming and costly task. As BBUS undertakes such a large number of excavations each year, to reduce the risk of accidents is a top priority for the company and a significant administrative overhead.

BBUS therefore decided it needed to automate the consolidation and delivery of safe-dig drawings, to give its teams the latest information while in the field.

The Solution

To do this, it selected a solution from NDL based on its awi universal integration technology. The awi^{SX} technology is now being used to automate the collection and provision of maps from the disparate range of mapping software in use by BBUS or its partners, irrespective of supplier, development language and delivery channel. Standard mapping

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applications already being used include BT OpenReach, YEDL, NEDL and MAPS gas mapping.

awi^{SX} from NDL links and integrates with systems regardless of vendor or age. It takes the place of proprietary APIs, saving the time and cost of acquiring multiple adaptors. In addition, training time is reduced as it works in the same industry-standard way for every application.

By using awi^{SX}, BBUS has eliminated the laborious and repetitive manual process for collating and printing 'safe-dig' map packs. Now, virtual map packs can be processed ready for electronic delivery to the field. This saves time by processing multiple mapping applications in one transaction, enabling BBUS to offer a better service to its clients and maintain an excellent health and safety record.

In addition, the automated mapping solution improves the management of emergency jobs, as urgent map packs can be delivered to dig crews in minutes without affecting the planned works schedule.

Benefits

BBUS has seen a wide range of benefits as a result of implementing awi^{SX} from NDL:

- Time and cost savings: the time taken to produce a map pack has been slashed from 30 minutes to less than five minutes, resulting in a huge resource saving over each month. This has also lowered the associated cost of each map.
- Operational efficiencies: using a single system to generate all safe-dig maps has enabled back-office staff to be redeployed on other tasks.
- Health and safety compliance: organisations are required to provide dig crews with relevant and accurate maps before work starts. By digitising and automating this process, compliance is assured, even in reactive emergencies.
- Audit trail: digital map packs create audit trails which are available for third-party inspection.
- Greater responsiveness: with maps available within minutes, response to emergencies such as leaking pipes is significantly improved.
- Greater accuracy: delivery of maps in real-time enables inaccurate location information to be corrected in the field.
- Carbon reduction: crews no longer have to return to base for map packs, cutting fuel consumption, and map printing is reduced.

According to Head of IT, BBUS:

"It is critical for our operatives to have up-to-date, detailed and timely mapping information to enable them to dig as safely as possible. With awi, we can consolidate different sources of information and deliver this speedily to them in the field. This then enables them to dig as accurately as possible, reducing risk on site, and protecting the safety of our teams and the general public."

For more information visit www.ndl.co.uk or contact info@ndl.co.uk.