

SSIMs + NAVIS AUTOSTOW

Bridging the automation gap for a complete planning solution

Small in size, diverse in cargo Napier Port is continually looking for innovative ways to manage our cargo requiring special stowage and improve productivity.

This is our story about how Napier Port's planning team developed the intelligent software programme SSIMs to enable AUTOSTOW to plan all special stow containers - enabling Napier Port to reap the full productivity benefits of AUTOSTOW and reduce vessel planning time by 95%.

CREATING A COMPLETE SOLUTION AUTOSTOW + SSIMs

AUTOSTOW ALONE



BENEFITS:

- Saves time on standard stows
- Stable repeatable results for standard stows
- Enables exception analysis to improve results

LIMITATIONS:

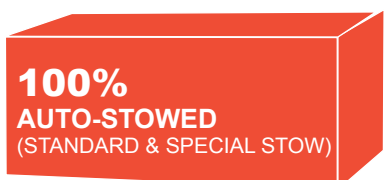
- Doesn't plan special stows
- Requires mix of manual & automated vessel planning
- Planners lack confidence in the results

To address the above limitations that Napier Port experienced during initial testing of AUTOSTOW, Napier Port developed the intelligent SSIMs software programme.

SSIMs bridges the special stow automation gap, and integrates seamlessly and effortlessly with AUTOSTOW to create a complete robust solution for fully automated ship planning.

AUTOSTOW + SSIMs

A Complete Automated Ship Planning Solution



BENEFITS:

- Fully automated vessel planning
- Plans standard & special stow containers
- Saves time on ALL stows
- Stable repeatable results across all stows
- Enables exception analysis across all stows

Recognising the benefits of AUTOSTOW

Always exploring ways to improve our operations and processes, the Napier Port planning team led by Chris Wylie, began the process to implement AUTOSTOW - with an eye to achieving the significant optimisation and automation benefits that the AUTOSTOW programme offers.

Designed to automate vessel planning AUTOSTOW offers the opportunity to save time, achieve stable repeatable results, and analyse exceptions for improved results - all benefits that our planning team knew would offer Napier Port significant productivity gains and cost savings.

SSIMs extends AUTOSTOW benefits to special stow

The diverse nature of cargo flowing through Napier Port's container terminal means that on average the terminal handles a 70/30 split special to standard stow containers. With this high level of special stow containers, Napier Port found AUTOSTOW generated plans were able to precisely plan at maximum 30% of our containers, leaving all special stow containers or 70% still needing manual planning. Unfortunately, as special containers take significantly longer to manually plan, this meant the ability for Napier Port to realise the benefits of using AUTOSTOW was initially severely limited.

To address this issue Napier Port began to explore opportunities for extending the AUTOSTOW function to include special stow containers, and led to the the undertaking of a significant project to develop and implement our own intelligent software solution SSIMs to bridge this gap.

SSIMs software programme

How does the SSIMs programme work?

The SSIMs software programme is driven by a complex decision matrix, with a defined set of rules, which took over 1500 hours to develop. The matrix integrates every variable of special stow criteria, to accurately generate a specific stowcode for every special stow combination.

SSIMs modifies the MOVINS file with this information, which in turn enables AUTOSTOW to generate an accurate stowage plan across all standard and special stow containers.

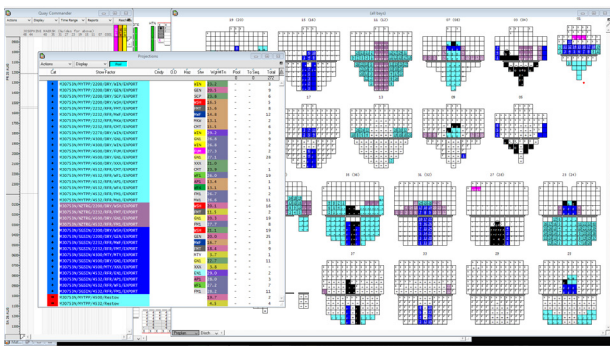
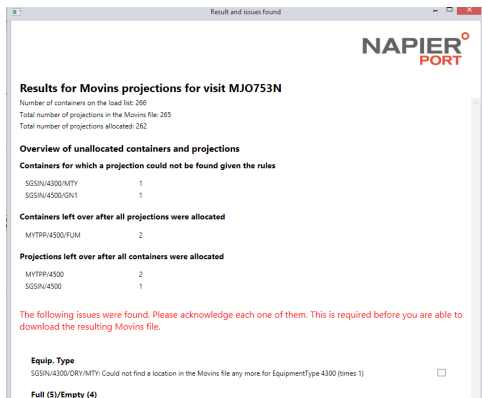
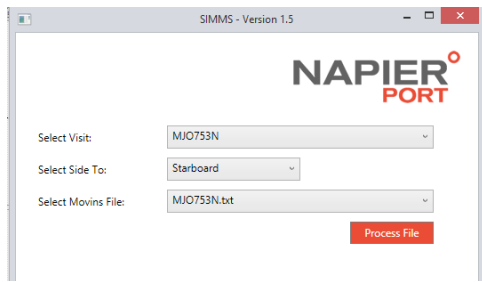
SSIMs is simple to use & integrates seamlessly with AUTOSTOW

Once implemented the SSIMs programme is simple for the ship planner to run. The SSIMs programme completes all the hard work in the background during processing.

All the planner needs to do is simply, open the SSIMs programme, select the relevant Vessel Visit, select the relevant MOVINS file, and click to process the file. SSIMs then processes the file and produces a report identifying any exceptions, and a revised MOVINS file which now includes a stowcode for every stow position.

The ship planner then imports the revised MOVINS file into NAVIS XPS as usual, and runs AUTOSTOW - this is when the magic happens - the vessel stow plan is generated in a matter of minutes, and any chance for human error has been eliminated.

What we've found at Napier Port is that AUTOSTOW + SSIMs delivers a 95% time saving. For example, a typical exchange of 800 moves at Napier Port previously took an experienced ship planner 120 minutes to plan manually. With AUTOSTOW + SSIMs this now takes only three minutes.



CHRIS WYLIE, Senior Container Terminal Planner
Running AUTOSTOW following SSIMs

Development and implementation

It took a cultural shift in the planning team

Planning is a precise operation, and Napier Port is fortunate to have a committed Planning team who take full accountability for the accuracy of their work.

Working with AUTOSTOW initially, the team found they needed to methodically review the automated plans. A time consuming and tedious process that delivered little benefit over manually planning vessels. This led to a lack of confidence and trust in automated planning.

Our team needed to trust the final solution, so when implementing SSIMs we created two simple checks that take less than five minutes to complete. AUTOSTOW + SSIMs now plans 100% of the containers at Napier Port 100% of the time.

Following the development process, and now nine months on from implementation, Napier Port is realising the benefits of fully automated accurate vessel stowage planning – and have a fully converted team of planners.

Significant gains with SSIMs in the first nine months

Our goals in implementing AUTOSTOW were to minimise rehandles during the exchange, clear yard blocks, and separate cranes.

SSIMs has enabled Napier Port to achieve these goals and gain the full benefits of AUTOSTOW across 100% of our container throughput.

A great example is the drop in rehandles during the vessel exchange. Using AUTOSTOW + SSIMs we have seen a drop in rehandles from 7% for a manual plan to less than 1%. The considerable dollar value savings and operational benefits of a 6% reduction in rehandles are compelling.

Also, where previously two ship planners planning the same vessel manually could result in two different plans, the combination of AUTOSTOW + SSIMs produces the same result every time. The benefits of a consistent loading plan every time delivers massive efficiency gains.

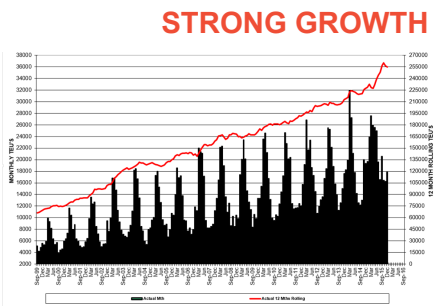
Plus, the result can be analysed and improved further.



NAPIER PORT

LOGS + BREAKBULK + CONTAINER TERMINAL

CONTAINER TERMINAL



IN NINE MONTHS WITH AUTOSTOW + SSIMs

260 VESSELS PLANNED

3900 LESS REHANDLES DURING VESSEL EXCHANGE

500 PLANNER HOURS GAINED



* PEAK TEU/MONTH ANNUALISED



Contact us.

If you'd like to find out more about
Napier Port's SSIMs software programme,
please contact Chris Wylie.

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