

WA Maritime Industry Brainstorm on Safer Marine Personnel Transfer Arrangements Workshop – 18 Sept 2024 (Assessment Results)

Safety & Suitability Assessment

1.1 Introduction

This assessment reviews a few options of marine personnel transfer specific to but not limited to marine pilot / personnel transfer to commercial ships.

1.2. Terms of Reference

The Terms of Reference provided to the “NI Workshop work group” to review various safe transfer of personnel to floating vessel/facility. The review included transfer options using:

- The current pilot ladder/combination transfer from pilot/crew transfer vessel;
- Work to Work (W2W) concept transfer from crew transfer vessel;
- Helicopter transfer on to ships with helidecks;
- Helicopter winching transfer;
- Jetpacks.

1.3. Background on the Brainstorm workshop

On 18th Sept 2024, a workshop was held at Shell House, Perth hosted by the Nautical institute WA Branch with kind support and sponsorship by Shell Australia. The workshop was a planned event where we had keynote speakers for the below topics and invited key members and industry SME's to participate in a live suitability assessment workshop to complete a suitability assessment into best practice methods for safe transfer of personnel in the marine environment. The session commenced by a safety moment presentation by Capt. Savio Fernandes (Harbour Master for Fremantle pilots), where he went through the recent pilot ladder incident and lessons learnt.

1.4. Attendance:

We had a total of 6 speakers, 12 in-person attendees and 11 attendees via TEAMS. (Total = 25)

1.5. Topics covered / Keynote speakers:

S.No	Topic	Name of Keynote speaker
1	<i>Pilot ladder</i>	Capt. Adam Roberts
2	<i>W2W (Dynamic Gangway)</i>	Ramesh Namasivayam & Colin Spence
3	<i>Helicopter transfer (Deck Landing)</i>	Capt. David Kenny
4	<i>Helicopter Winching</i>	Keith Thompson
5	<i>Jetpacks</i>	Zubin Bhada

1. Situation: Maritime personnel transfer currently involves a transfer using a pilot launch (small vessel) to get personnel (such as maritime pilots, officials, agents) to the Ship (Tanker, Bulk Carrier, Car Carrier, etc..) using a Pilot rope ladder or in combination with the Ship Gangway / Accommodation ladder, to get on board the SHIP.
2. Current Issue – Worldwide injuries and fatalities continue.
3. Challenge Question - What are the safer existing and emerging alternatives that can “shift the dial” and reduce risk to ALARP?
4. Exploring the Answer: Brainstorm/Workshop with speakers from different fields (marine, aviation industry - helicopters, drones, jetpacks, W2W gangways vendors and port and pilotage providers).
5. Frame for this brainstorm workshop: Safe transfer of personnel to floating vessel/facility.

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1.6. Risk Assessment (RA)

Please rank for People, Asset and Community based on unmitigated risk (*i.e., if the equipment were to be used as is and an event occurred what would be the consequence?*)

The below table is the average ratings from the workshop 18 Sept 2024.

Risk Assessment Template

Method of transfer	People	Asset	Community
Pilot Ladder	3.9	1.7	2.7
W2W	1.3	2.0	1.3
Helicopter Transfers	1.5	3.2	2.2
Helicopter Winching	1.6	3.1	2.2
Jetpack	1.8	2.2	2.6

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- 1.7. **Suitability Assessment:** Please rank the Suitability of the mode of transfer below. The review requires each method to be analysed for below topics (as a minimum) Note: More topic/conditions can be added for the suitability check.

Below table is the average tally / results from the Workshop – which includes data from MENTI and individuals who scored on hard copy sheets.

Date of Workshop 18 Sept 2024	Average					
Method of transfer	Safety	Cost	Simplicity	Proven safe method	Method reliability	Overall Suitability <i>(for Further research)</i>
	Rating 1-5	Rating 1-5	Rating 1-5	Rating 1-5	Rating 1-6	Total of 5 elements
	<i>5 being safest</i>	<i>1 being Most expensive</i>	<i>5 being most simple</i>	<i>5 being most proven</i>	<i>5 being most reliable</i>	<i>Please provide comments if any.</i>
Pilot Ladder (Combination)	2.6	5.0	3.3	2.1	2.1	15.1
W2W / Dynamic Gangway	4.3	2.7	2.5	4.5	4.3	18.3
Helicopter Transfer / Deck landing	4.3	1.3	3.1	4.3	4.2	17.3
Helicopter Winching	4.2	2.4	3.7	4.2	4.0	18.5
Jetpack	2.0	2.3	2.4	2.0	2.0	10.7

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1.8. Conclusion

From this 18th Sept 2024 brainstorm workshop:

1. It is evident that a combination pilot ladder arrangement is the most / highest utilised method of safe transfer of personnel.
2. A consensus was reached to further investigate both helicopter winching and walk to work dynamic gangway concepts as alternatives.
3. More work is required to strengthen current known industry research and concept feasibility of these two alternatives.

Note: For item-3, NIWA would be happy to support further engagement with a wider range of industry for the two concepts Helicopter winching & Walk to Work.

1.9. Actions & Next Steps

S.No.	Description of Next step	Actionee Responsible	Estimate date for action
1	Submit this workshop report to NI HQ for their review and comments	Capt Zubin Bhada Capt Peter Waller	Oct 2024
2	NI-WA to work with NI-HQ to formulate / coordinate further industry sessions with wider participation.	Capt Zubin Bhada Capt Peter Waller	Q1-Q2 - 2025

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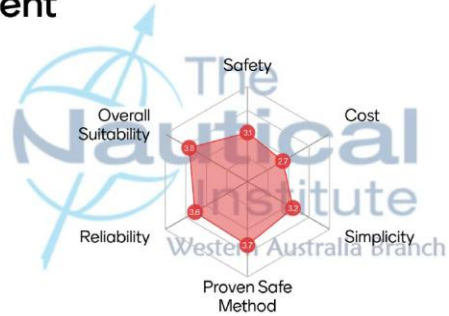
1.10. Risk Assessment Matrix:

Level	PEOPLE	ASSETS	COMMUNITY
0	No Injury or Health Effect	No Damage	No Effect
1	Slight Injury or Health Effect <ul style="list-style-type: none"> ▪ No Treatment Case or First Aid Case. ▪ Illnesses that result in noticeable discomfort, minor irritation or transient effects that are reversible after exposure stops. 	Slight Damage Costs less than US \$100,000	Slight Effect, indicated by: <ul style="list-style-type: none"> ▪ Infrequent slight nuisance. (Nuisance to include interference with reasonable comforts and enjoyments of life, general inconvenience relating to day-to-day activities or enjoyment of land). ▪ No observable adverse or perceived effect on livelihood, social and cultural assets, community security, community health, vulnerable or Indigenous People. ▪ Local public awareness but no discernible concern.
2	Minor Injury or Health Effect <ul style="list-style-type: none"> ▪ Medical Treatment Case. ▪ Lost Workday Case or Restricted Work Case, where either has a duration of up to and including 5 days. ▪ Illnesses with reversible health effects such as food poisoning and dermatitis. 	Minor Damage Costs between US \$100,000 and US \$1 million	Minor Effect, indicated by: <ul style="list-style-type: none"> ▪ Limited short-term nuisance ▪ Limited effects on livelihood and/or social or cultural assets, community health. ▪ No observable adverse effect on community security, vulnerable or Indigenous Peoples. ▪ Local public concern.
3	Major Injury or Health Effect <ul style="list-style-type: none"> ▪ Lost Workday Case or Restricted Work Case, where either has a duration exceeding 5 days. ▪ Illnesses with irreversible health effects such as sensitisation, noise induced hearing loss, chronic back disorders or repetitive strain injury. ▪ Mental illness due to stress with reversible health effects. 	Moderate Damage Costs between US \$1 million and US \$10 million	Moderate Effect, indicated by: <ul style="list-style-type: none"> ▪ Persistent nuisance. ▪ Effects on livelihood and/or social and cultural assets, community health. ▪ Limited observable effects on community security, vulnerable or Indigenous Peoples. ▪ Local or Regional public concern. ▪ Local stakeholders, e.g., community, NGO, industry and government, are aware.
4	Permanent Total Disability or Up to 3 Fatalities <ul style="list-style-type: none"> ▪ Illnesses with irreversible health effects such as corrosive burns, asbestosis and silicosis. ▪ Cancer. ▪ Mental illness due to stress with irreversible health effects. 	Major Damage Costs between US \$10 million and US \$100 million	Major Effect, indicated by: <ul style="list-style-type: none"> ▪ Persistent effects on livelihood and/or social and cultural assets, community health. ▪ Effects on community security, vulnerable or Indigenous Peoples and/or human rights infringements, that are serious and/or at a community level. ▪ Mitigation is complex or protracted. ▪ National public concern. Impact on local and National stakeholder relations. National government and/or NGO involvement with potential for international NGO action.
5	More than 3 Fatalities <ul style="list-style-type: none"> ▪ Illnesses with irreversible health effects such as multiple. asbestosis cases traced to a single exposure situation ▪ Cancer in a large exposed population. 	Massive Damage Costs in excess of US \$100 million	Massive Effect, indicated by: <ul style="list-style-type: none"> ▪ Persistent, severe impact on livelihood, social and cultural assets, community security, community health, vulnerable or Indigenous Peoples and/or human rights infringements. ▪ Impact may affect a large geographic area or population. ▪ Mitigation is complex or protracted, and of limited effectiveness. ▪ International public concern. ▪ High level of concern and action(s) by governments and/or by international NGOs.

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1.11. Appendix – MENTI Results:

Pilot Ladder Transfers - Suitability Assessment



Walk to Work Vessel / Gangway - Suitability Assessment



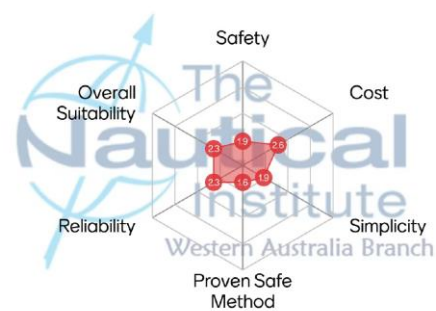
Helicopter Deck Landing - Suitability Assessment



Helicopter Winching - Suitability Assessment



Jetpacks - Suitability Assessment



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1.2. Appendix – Photographs:

