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Risk Management and Disaster Response in the Oil and Gas Industry: Set-up, Design, and Implementation of Innovation and Interoperable Solutions for a Mobile Field Hospital (MFH) Dedicated to the Oil and Gas Industry

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SET-UP, DESIGN AND IMPLEMENTATION OF INNOVATIVE AND INTEROPERABLE SOLUTION FOR A MOBILE FIELD HOSPITAL (MFH) DEDICATED FOR OIL AND GAS INDUSTRY.

Overview

Disasters in intricate environments requires response that is adapted(promptness, deployment and retrieval etc.) to the needs of the affected.

MFH-A mobile health facility capable of rapid deployment and expansion to meet immediate emergency needs.

Because of the prevalence and maturity of available tools, the use of a standard modelling language such as Business Process Model and Notation (BPMN) is recommended to define procedures and processes.

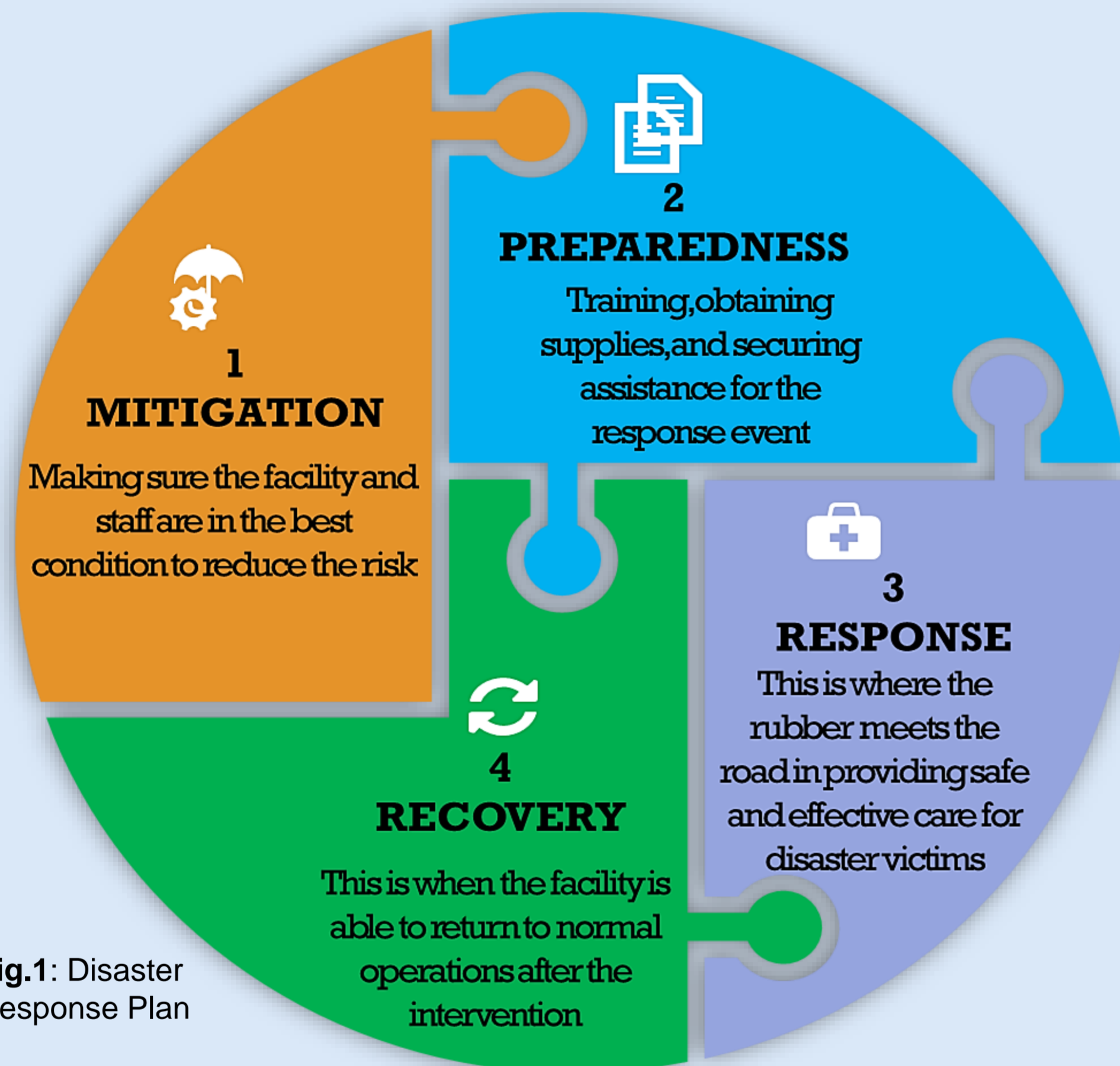


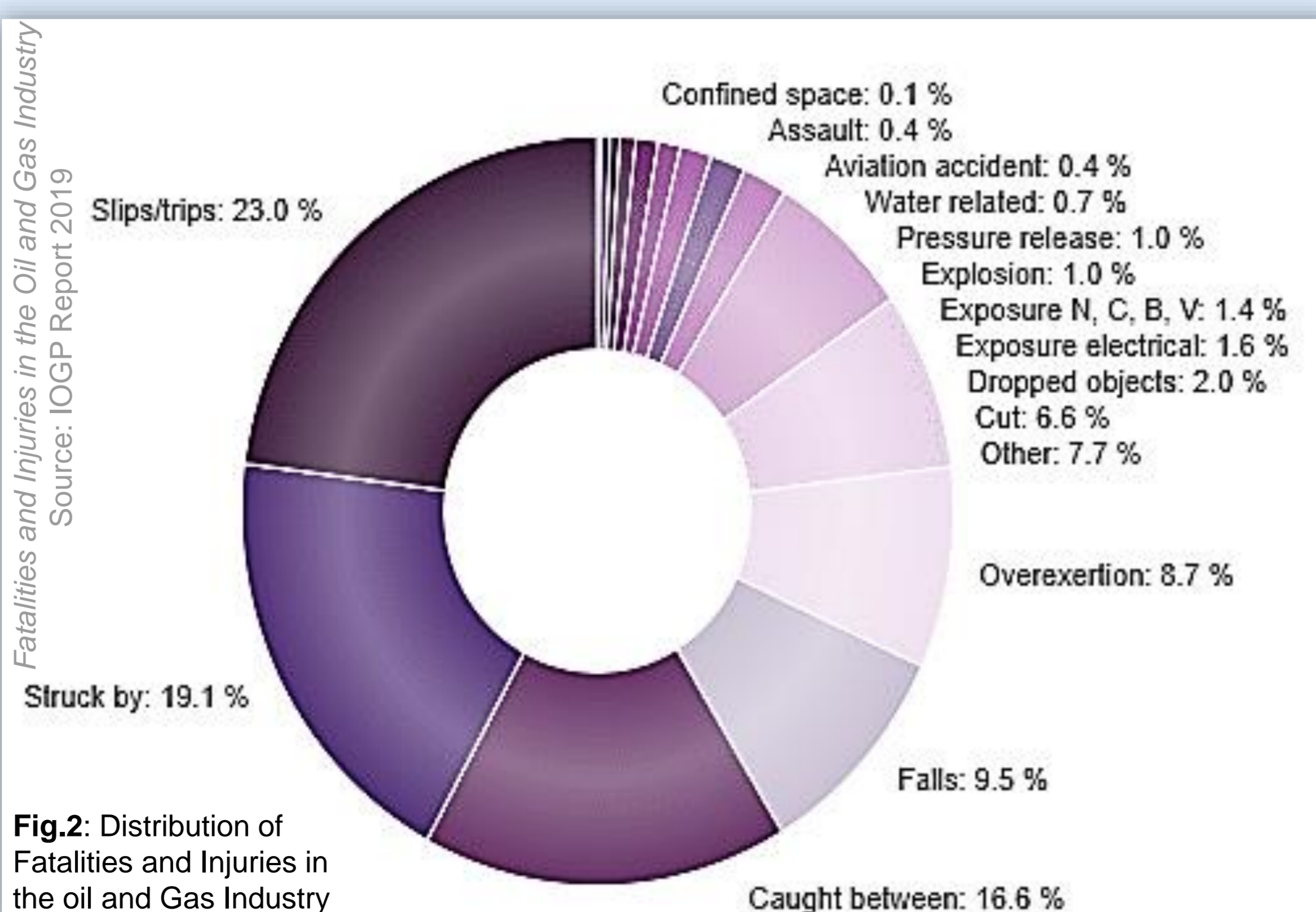
Fig.1: Disaster Response Plan

Objectives

- ▶ Design and innovative and interoperable MFH for the oil and gas industry,
- ▶ Propose most appropriate set up with best functionality, deployment and transportation options,
- ▶ Identify driving features for MFH dedicated for the oil and gas industry,
- ▶ Recommendation for training and best practices guidelines.

Research Questions

- ▶ What factors drives disasters/accidents episodes during drilling and production operations?
- ▶ What are the common hazards in the oil and gas industry?
- ▶ Is the interoperable MFH dedicated for the oil and gas industry sustainable?



Methodology

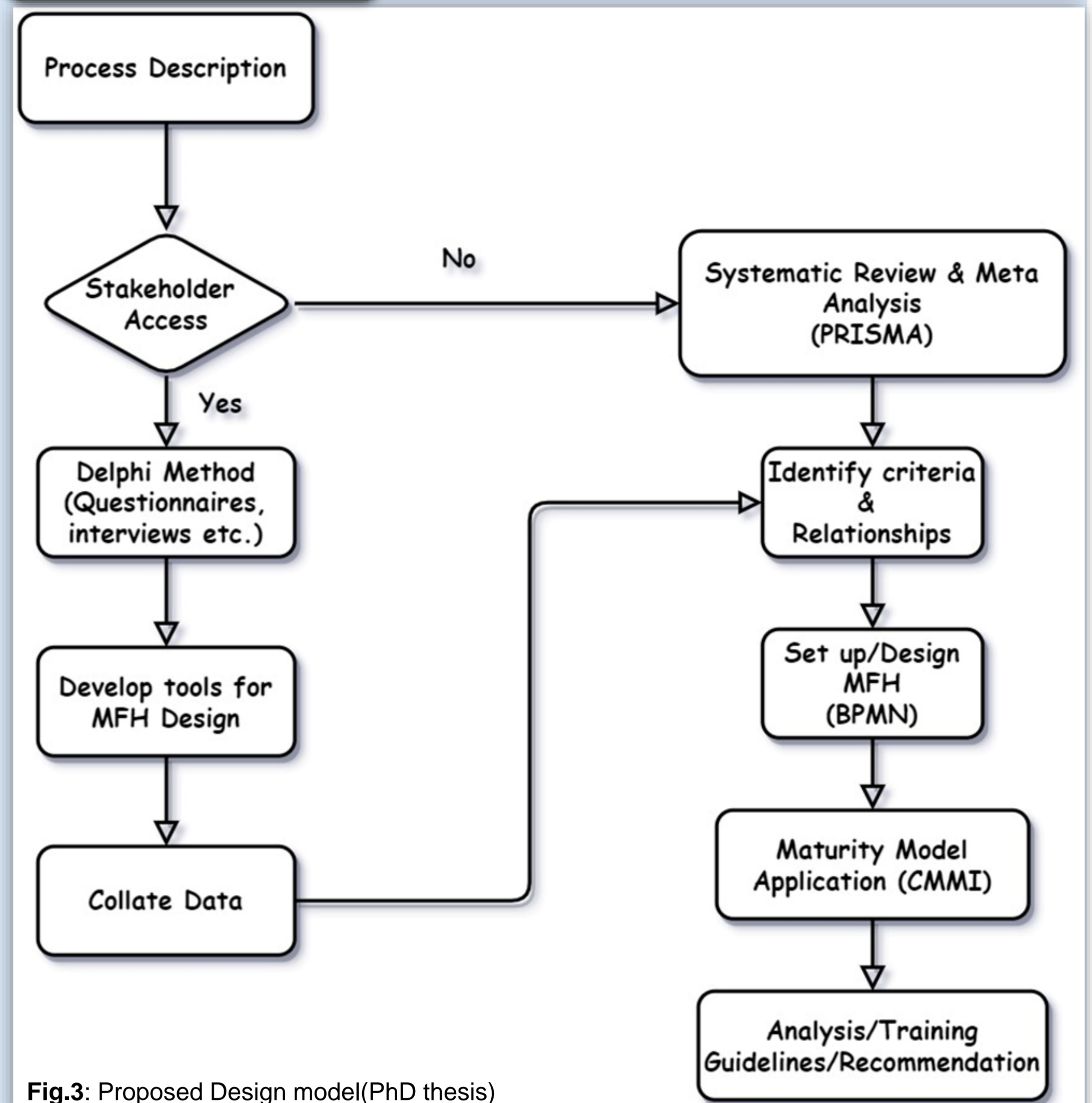


Fig.3: Proposed Design model(PhD thesis)

Expected Outcomes

- ▶ Innovative set-up/design and orientation of the most appropriate components for the MFH dedicated for the oil and gas industry,
- ▶ A detailed guideline to support users training, in order to minimize associated mobile field hospital deployment/retrieval challenges,
- ▶ Recommendation of innovative mobile field hospital wastewater treatment technology.

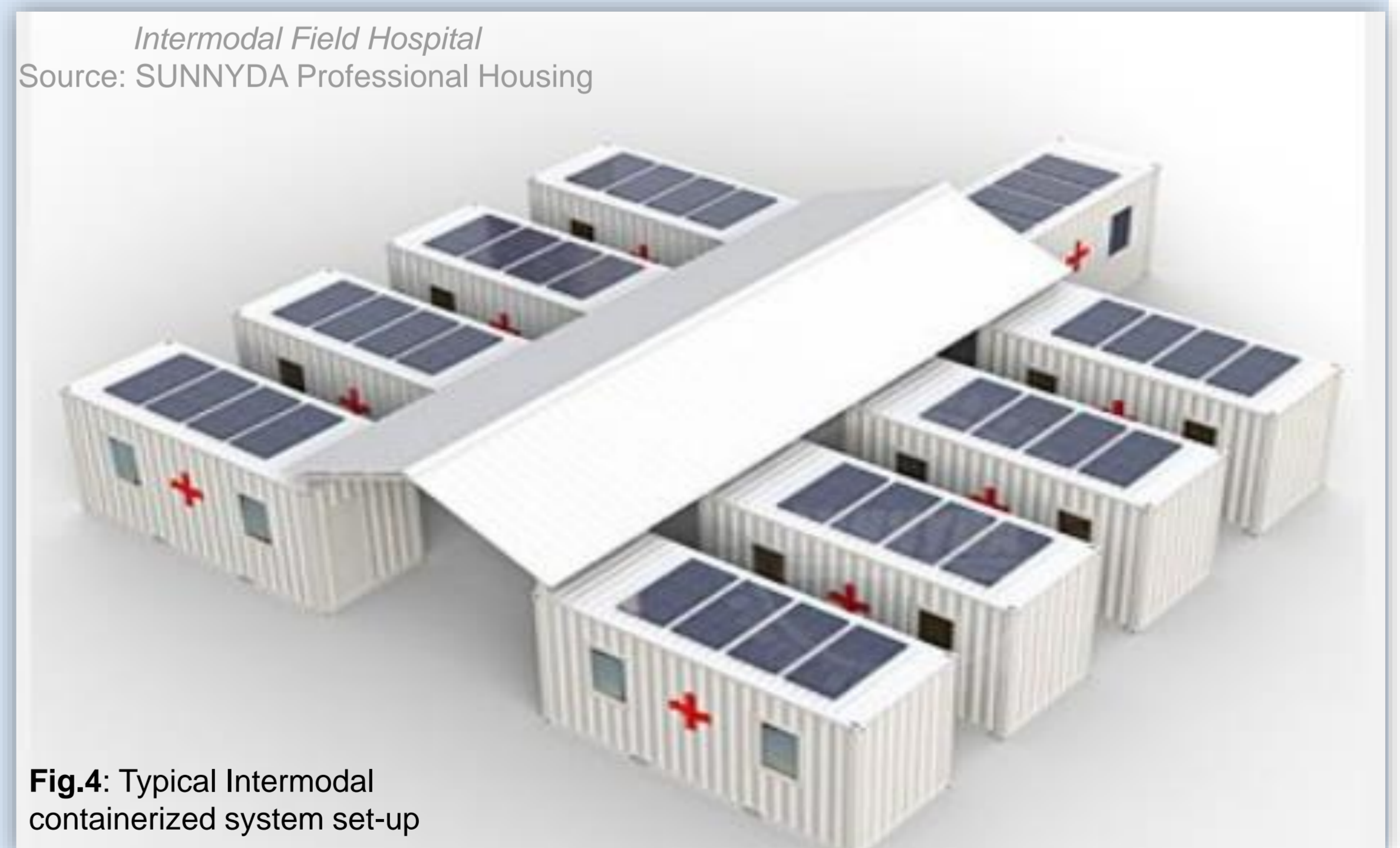
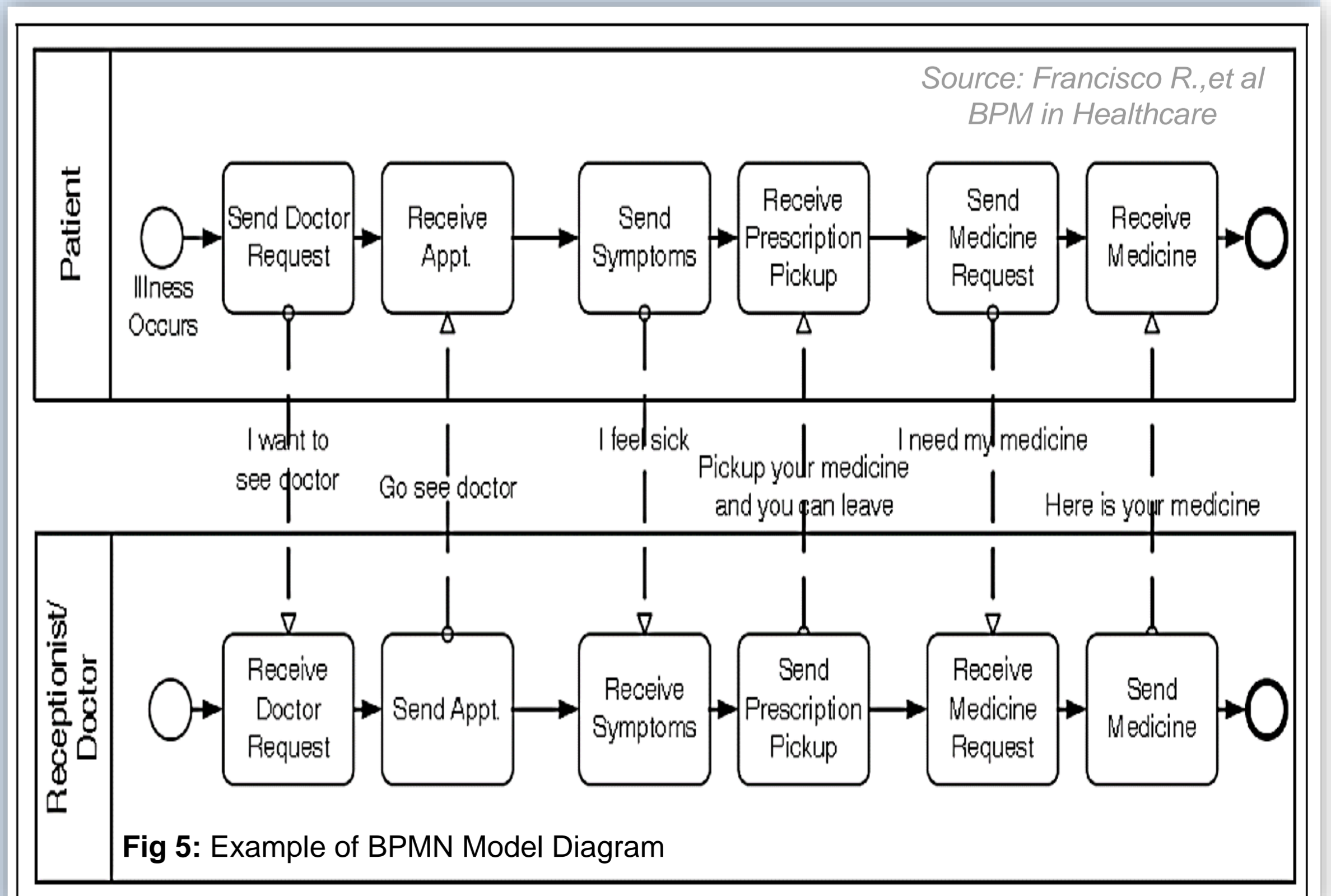


Fig.4: Typical Intermodal containerized system set-up



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