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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.

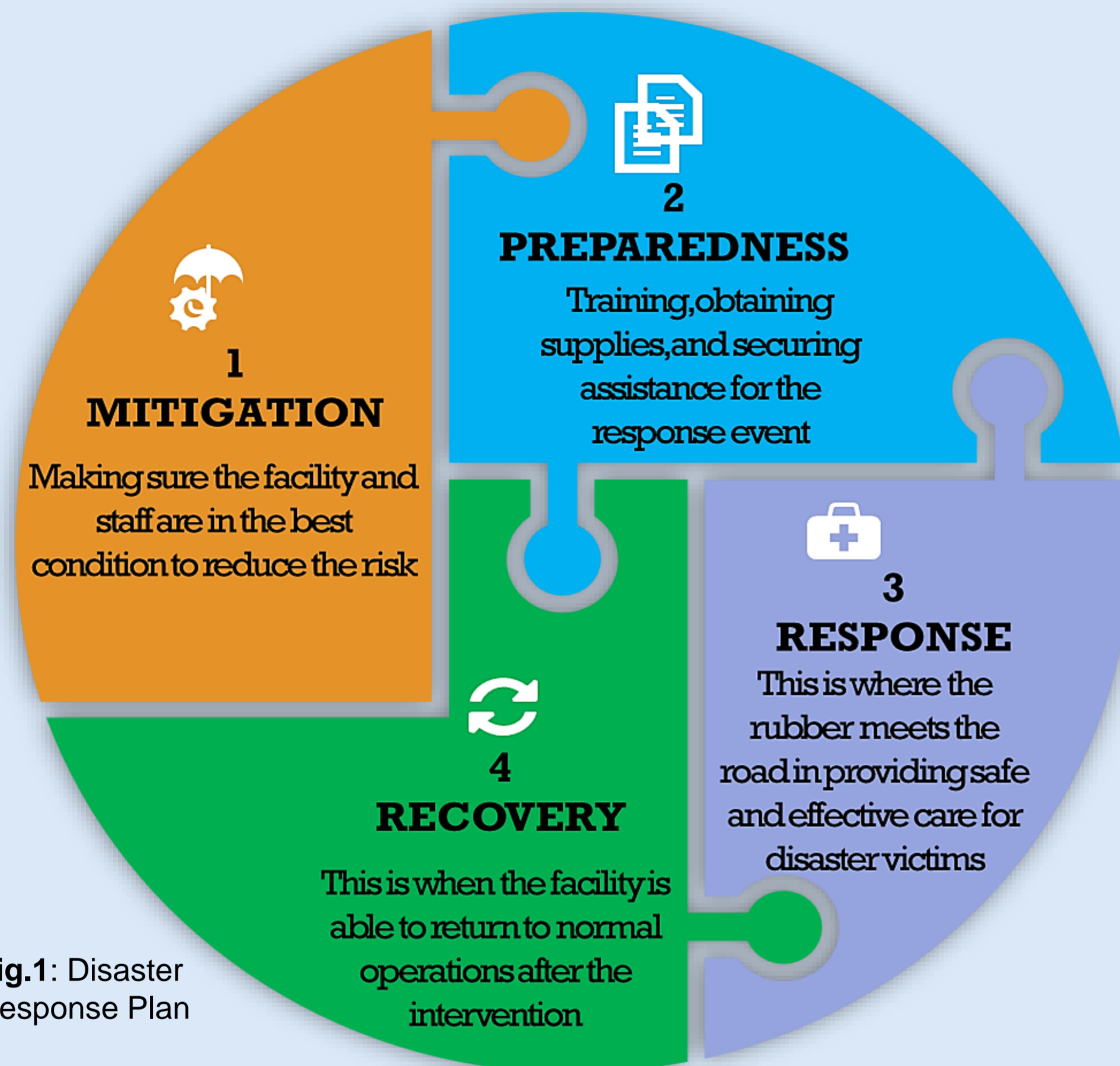


Fig.1: Disaster Response Plan

### 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?

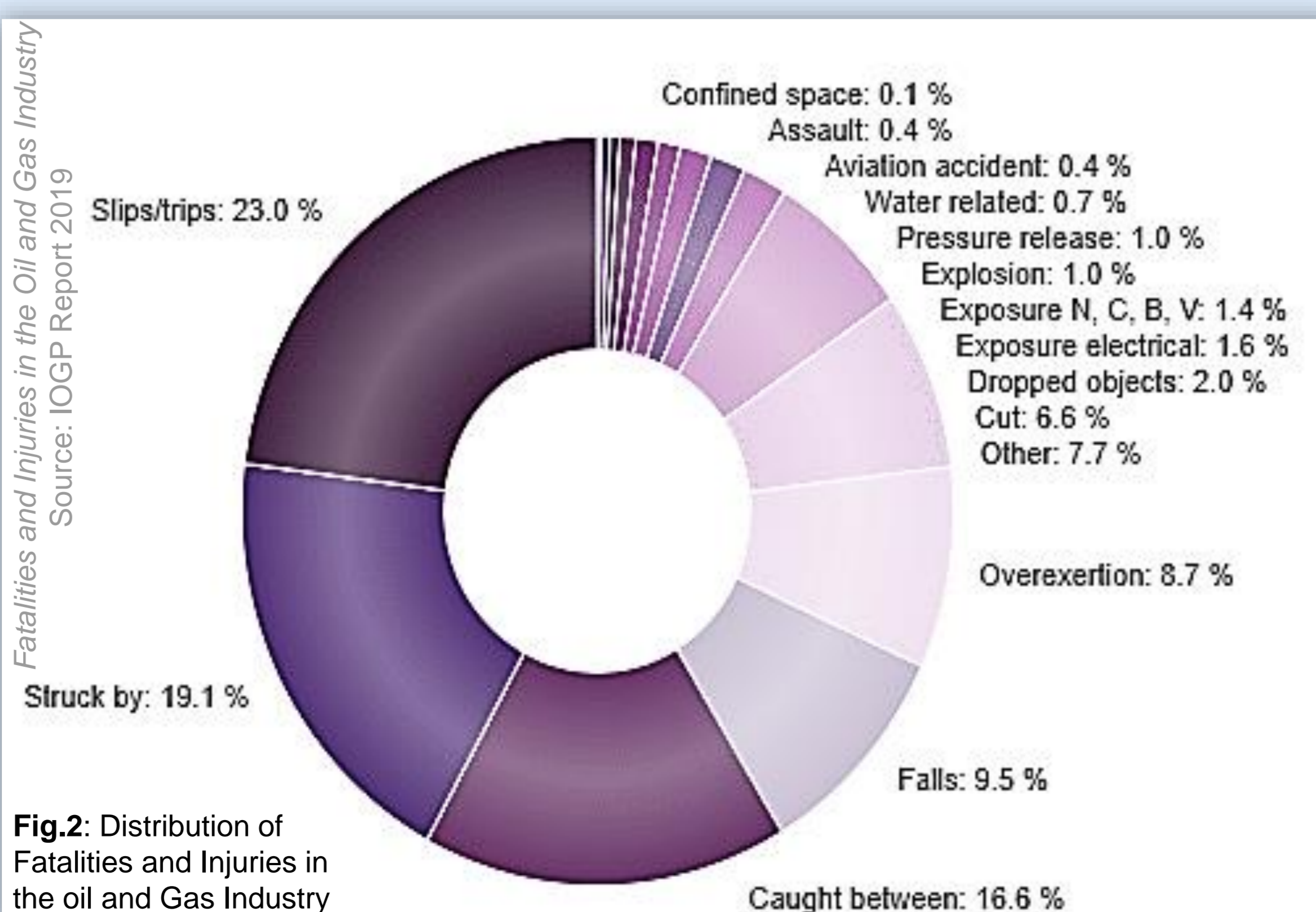


Fig.2: Distribution of Fatalities and Injuries in the oil and Gas Industry

### Methodology

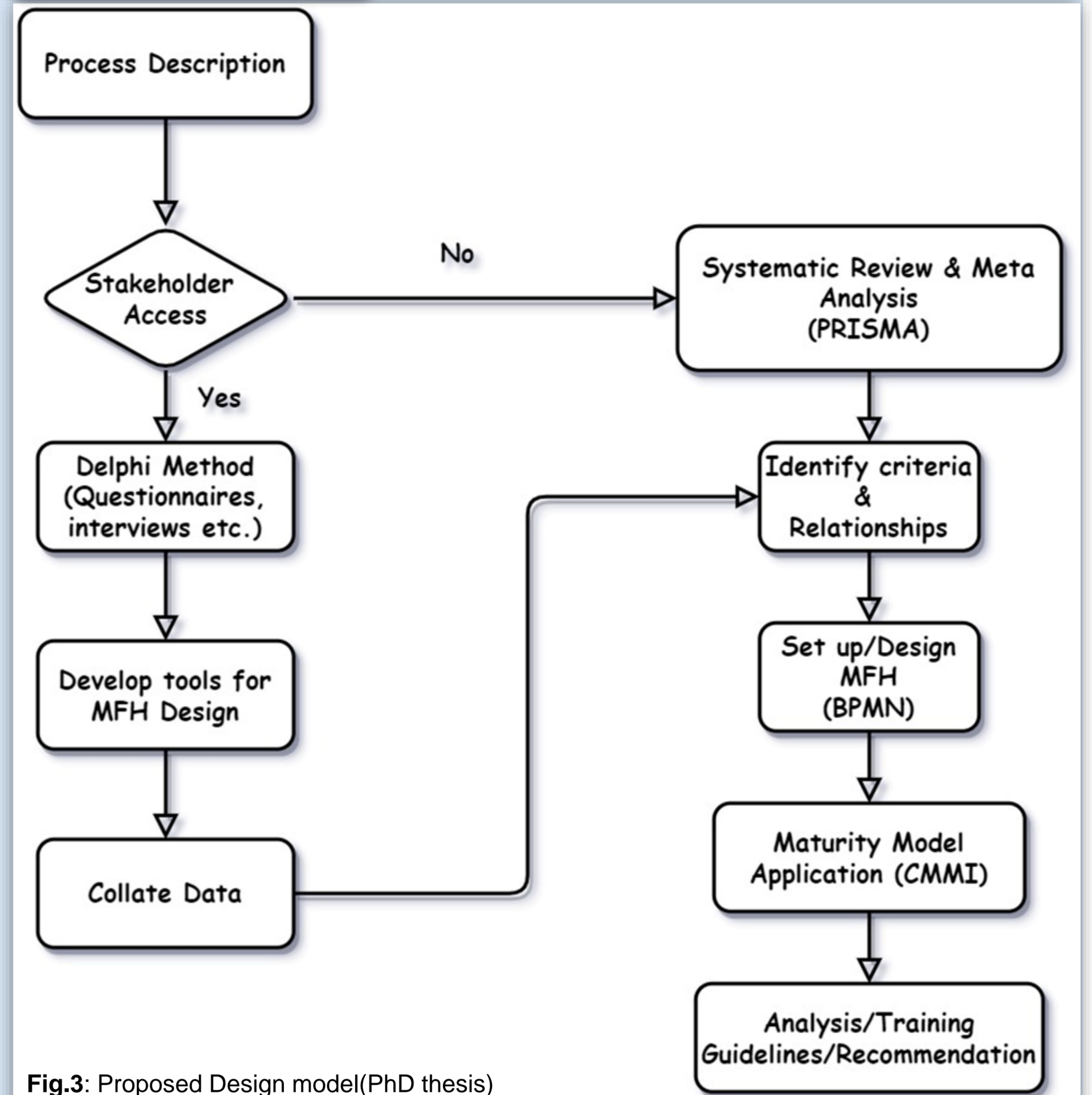


Fig.3: Proposed Design model(PhD thesis)

### 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.

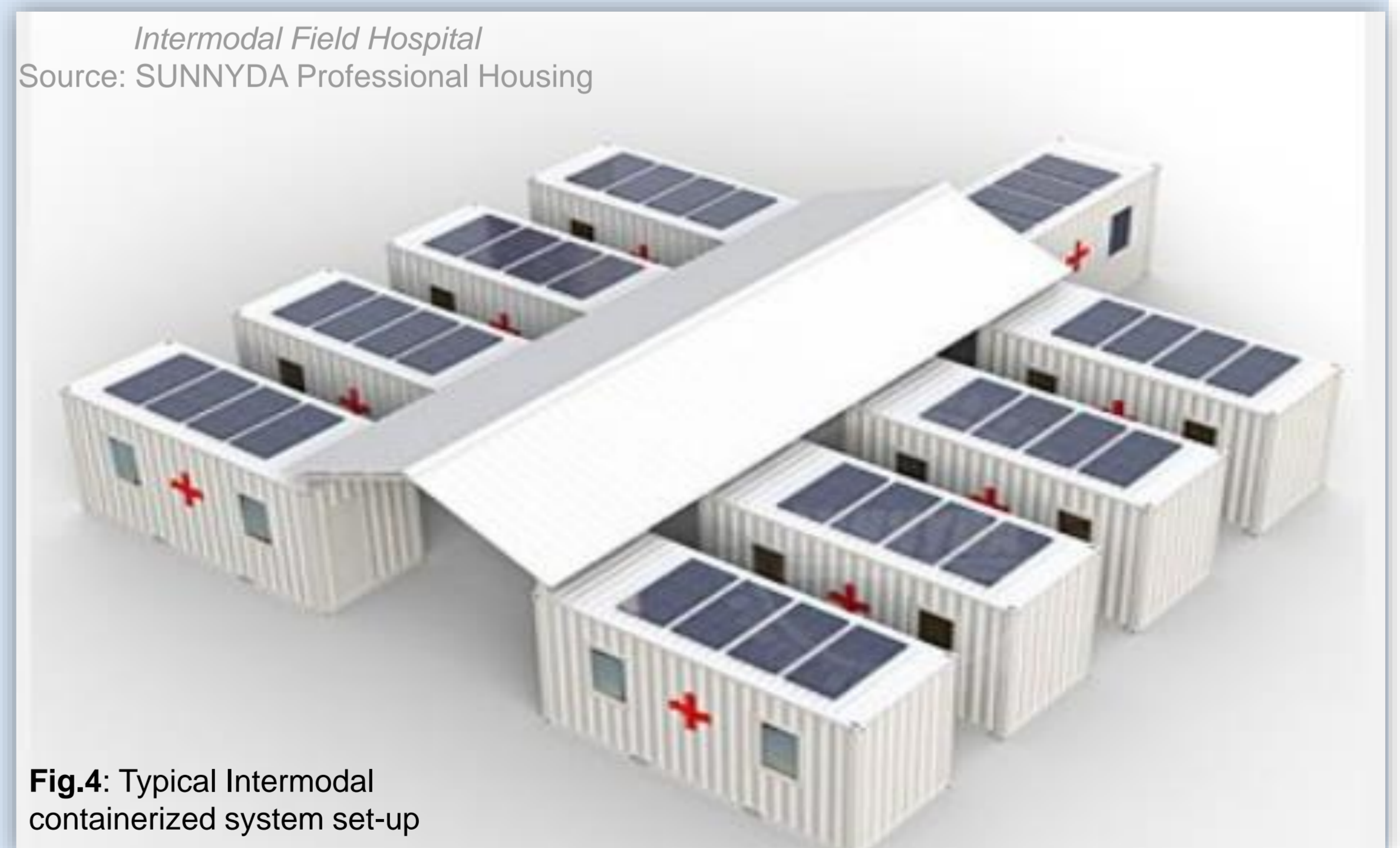


Fig.4: Typical Intermodal containerized system set-up

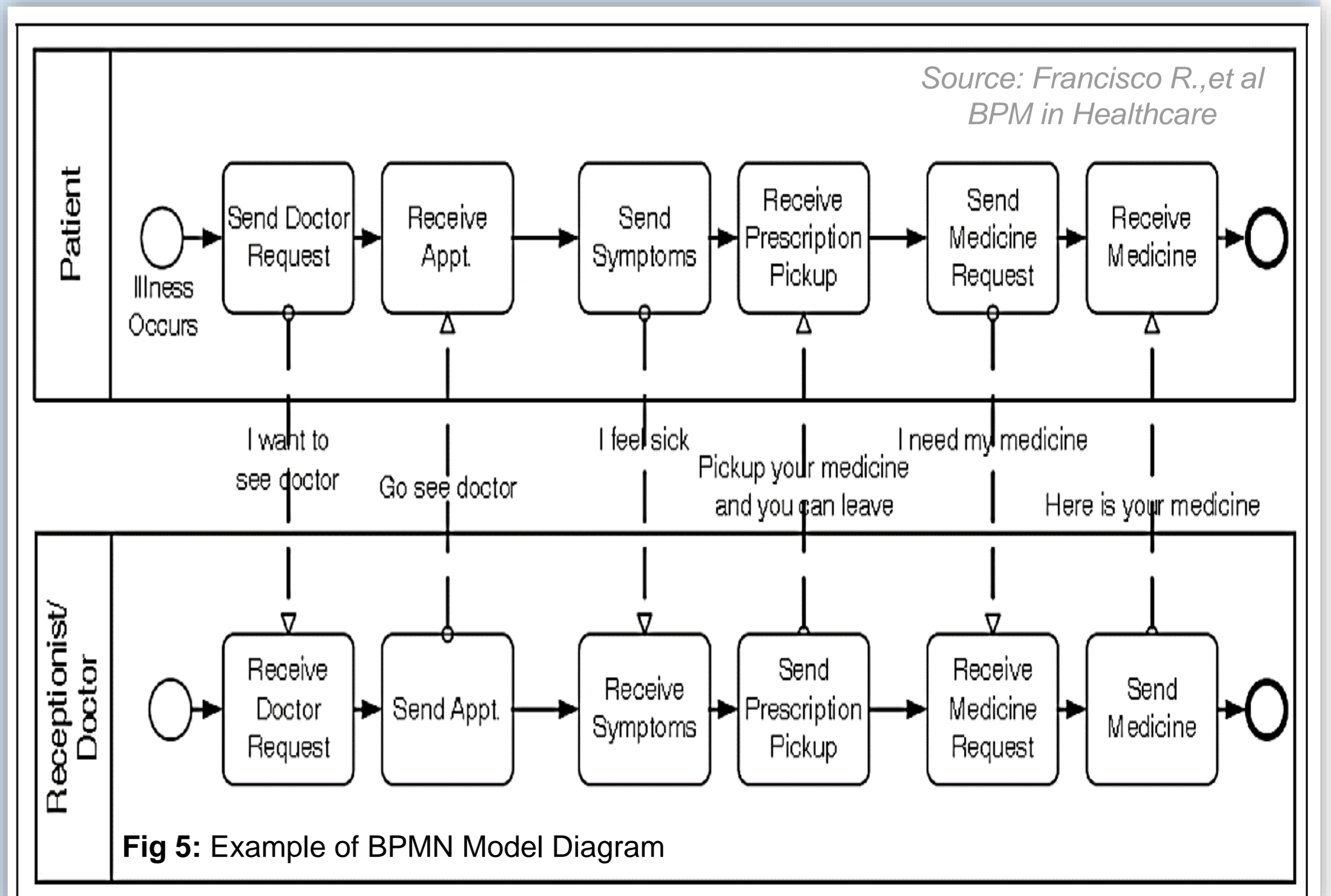


Fig 5: Example of BPMN Model Diagram

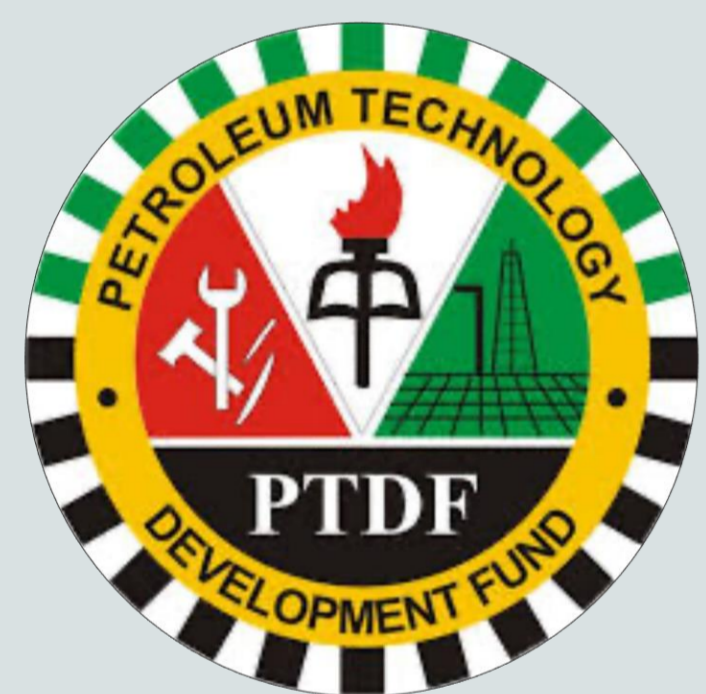
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