



## Project Review of the Blue Lagoon, Myvatn Nature Baths and the Olkaria Geothermal Spa

**Peketsa Mangi**

**Addis Ababa, Ethiopia**

- 2<sup>nd</sup> November – 6<sup>th</sup> November 2016

# OUTLINE

- Introduction
- Project Management approach application
- Results and discussion
- Conclusions and recommendations

# INTRODUCTION

A project:

- Unique
- Time and cost-constrained operation
- To realise a set of defined deliverables
- Should achieve quality standards and requirements.

It is a temporary endeavour

- [www.youtube.com/watch?v=sqwTv9sODhg](http://www.youtube.com/watch?v=sqwTv9sODhg)



Year	MWt	TJ/yr	GWh/yr
2015	70,329	587,786	163,287
2010	48,493	423,830	117,740
% Increase	45	38.7	38.7

(Source: (Lundi and Boyd, 2015))

Growth in direct use projects-

Kenya implementing direct use projects

Condensation of steam at Eburru- potable water

Construction of Geothermal Spa

Greenhousing heating at Oserian

# BACKGROUND TO THE STUDY

## **Blue Lagoon- located on Rekjanes peninsula, SW Iceland**

- Brine from Svartsengi power plant
- Bathing in 1980's
- Healing from psoriasis and other skin ailments
- Opened to public in 1987
- Commercialised in 1994- Blue Lagoon Ltd
- 700,000 visitors per year, mostly tourists
- Automatic temperature control



- **Myvatn Nature Baths- located in Myvatn area, Northern Iceland**
- Rudimentary structure
- Constructed from October 2003- June 2004
- Bathing facility for community
- 200,000 visitors per year
- Automatic temperature control



FIGURE5: Myvatn Nature Baths  
BathsBaths

(Source: Ludvik's lecture on  
Námafjall High Temperature area,  
2015)

# Olkaria Geothermal Spa

- To diversify geothermal resource utilisation
- Constructed April 2011-July 2013
- 14,000 visitors per year

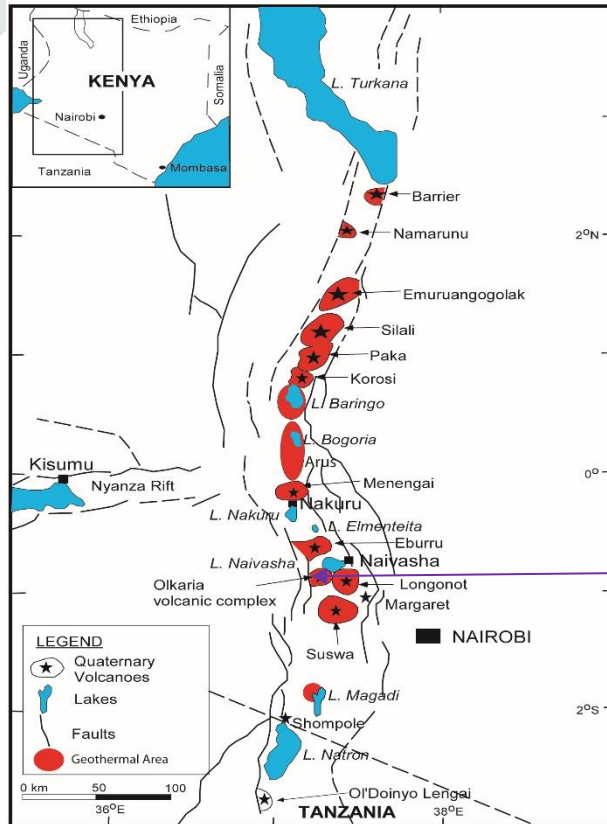


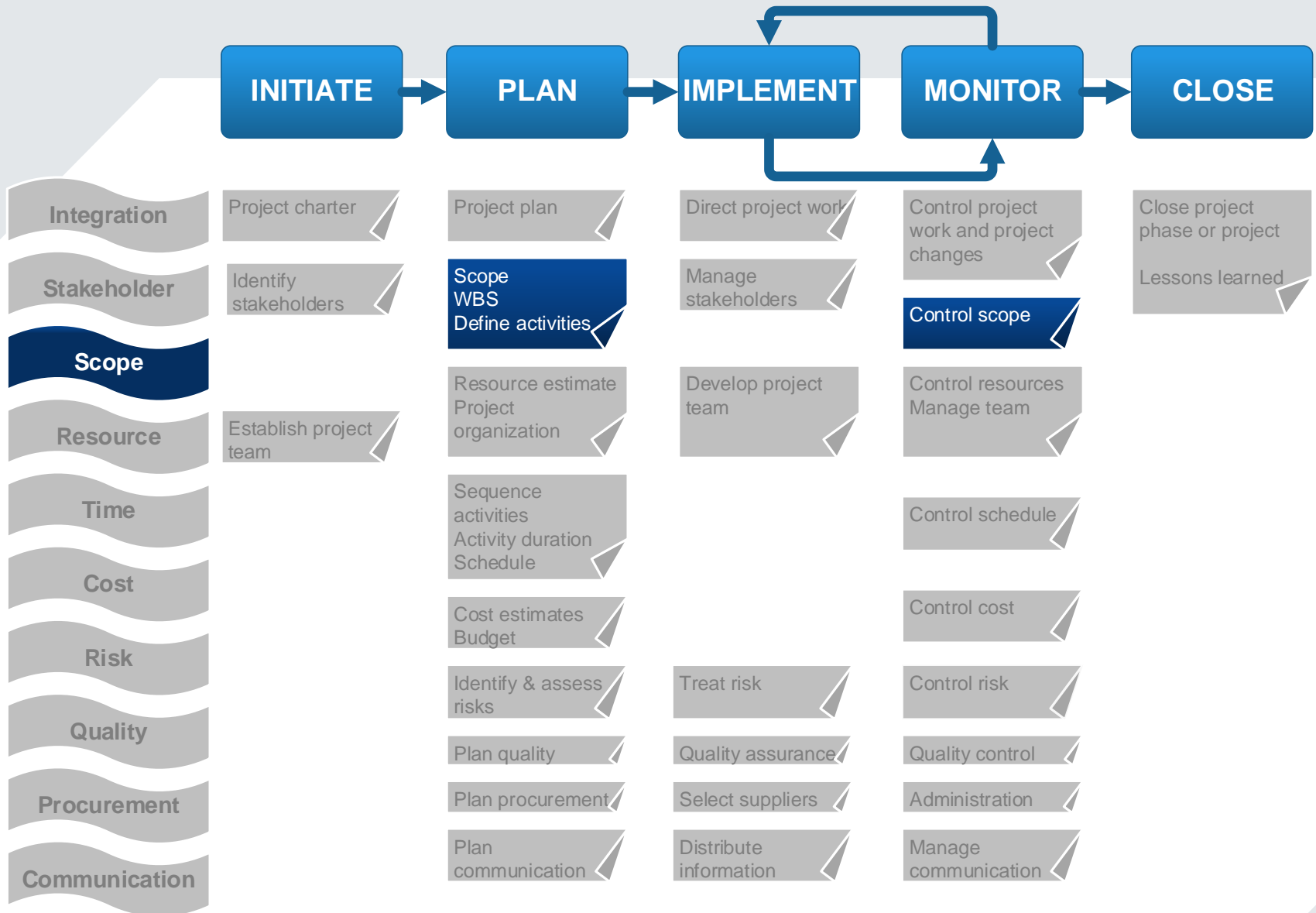
FIGURE 2: Panoramic view of the Olkaria Geothermal Spa

# Project review

- Review the level of project management approach that was applied at the Olkaria Geothermal Spa, the Myvatn Nature Baths and the Blue Lagoon
- Propose suitable project development approach for similar geothermal direct use projects



# PROJECT LIFE CYCLE AND KNOWLEDGE AREAS



Source: PMBoK, 2013)

# Methodology

- Documentary sources
- Observation
- Interviews

# Project Management approach rating

Grade	Description
1	Poor understanding and adoption of project management techniques, poor application of knowledge areas or technical, behavioural and contextual competences
2	Fair understanding and adoption of project management techniques, knowledge areas or technical, behavioural and contextual competences
3	Good understanding and adoption of project management techniques, knowledge areas or technical, behavioural and contextual competences
4	Very good understanding and adoption of project management techniques, knowledge areas or technical, behavioural and contextual competences
5	Excellent understanding and adoption of project management techniques, knowledge areas or technical, behavioural and contextual competences

# Final rating

PHASES AND SUBJECTS	Olkaria Geothermal Spa Rating	Blue lagoon Rating	Myvatn Nature Baths Rating
CONCEPT/ INITIATION	2	4	4
PLANNING	3	5	5
IMPLEMENTATION	3	5	4
CLOSURE	5	5	5
	Olkaria Geothermal Spa	Blue Lagoon	Myvatn Nature Baths
<b>SUMMARY RESULTS</b>	<b>3</b>	<b>5</b>	<b>4</b>

# Main Findings

- *Project management and technical challenges experienced at the Olkaria Geothermal Spa*
- *Risk Management review at the Blue Lagoon*
- *Reinjection well at Myvatn Nature Baths*



# CONCLUSIONS AND RECOMMENDATIONS

- Uncertain outcomes, opportunities and threats- Adopt flexible project management approach
- Certain outcomes- strict project management approach
- Olkaria Geothermal Spa- enhance use of geothermal fluids to improve quality of service

- Phased development for direct use projects- start small, collect baseline data. Grow. More time on research
- Blue Lagoon- reinjection wells to avoid environmental damage that can strain relationship with stakeholders
- Myvatn Nature Baths- deeper ree injection well, 200 metres- to avoid mixing with groundwater which can strain relationship with community and other stakeholders
- Blue Lagoon and Myvatn Nature Baths- Safety briefs- for risk management

THE END



Panoramic view of the Olkaria Geothermal Spa

*Thank  
You*