

My journey as a Chemical Engineer in the Water Industry

Maryam Farhanah MEng (Hons) CEng MIChemE
MMB Water & Wastewater Treatment Practice Leader

27 April 2021



Introduction

Background about myself

Current residence

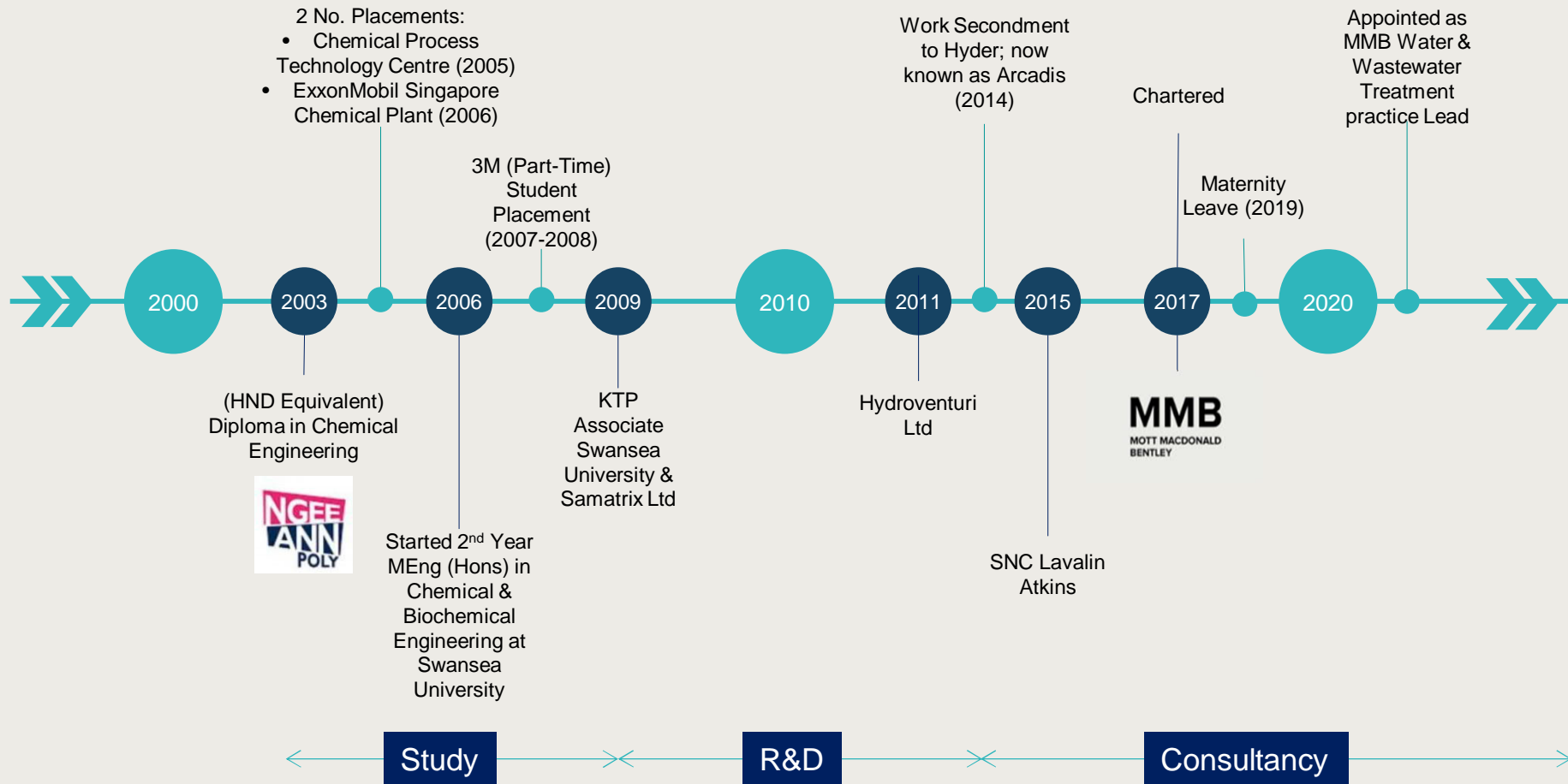
Cardiff, Wales

County of origin

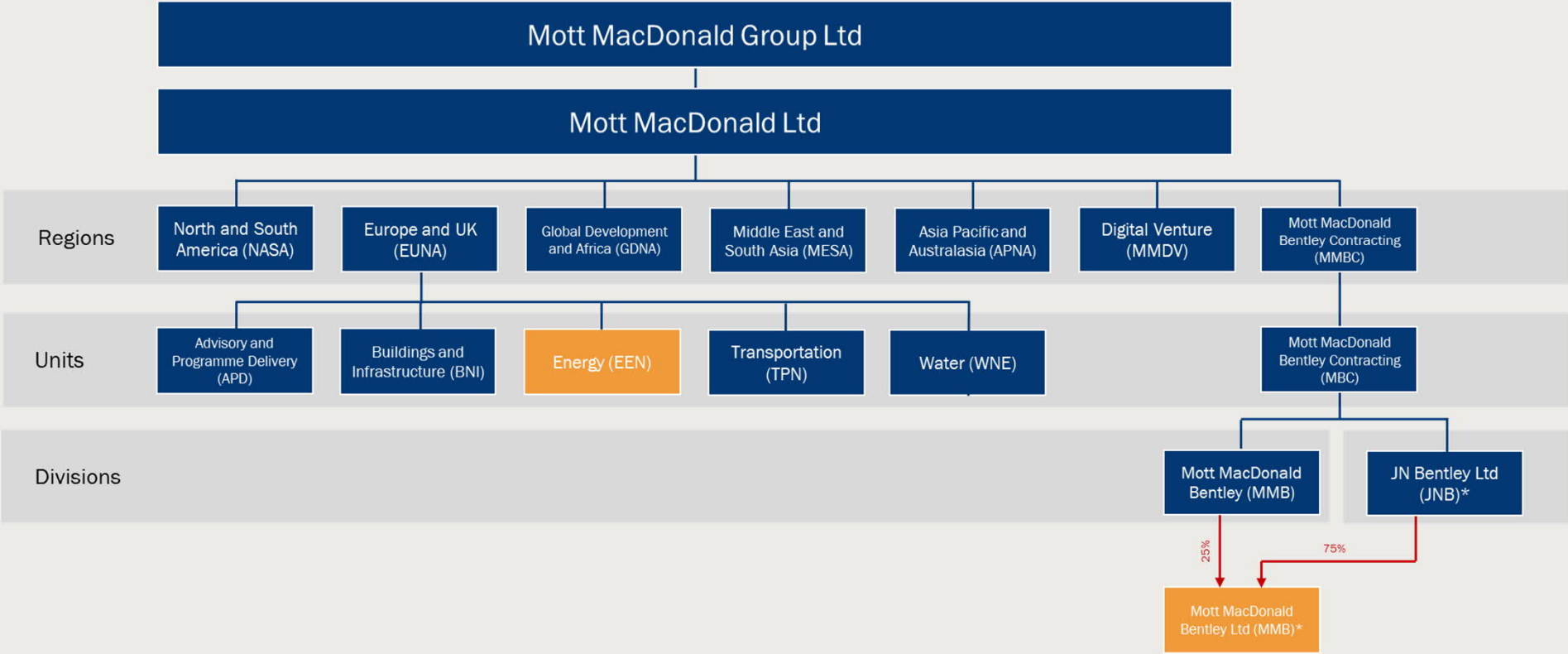
Singapore



My Journey

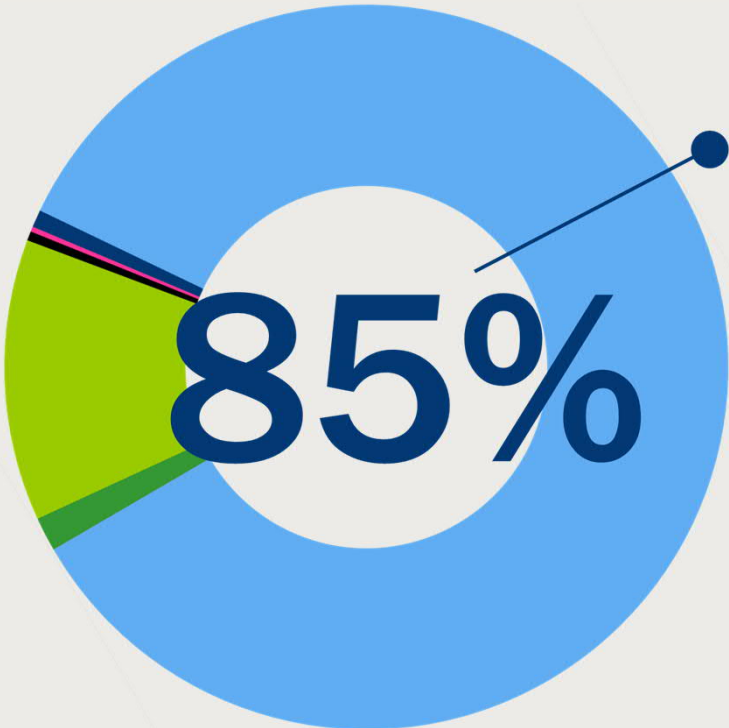


Who we are



*The parent company of JN Bentley Ltd is Bentley Holdings Ltd, a wholly owned subsidiary of Mott MacDonald Group Ltd

What we do



Water and waste water sectors



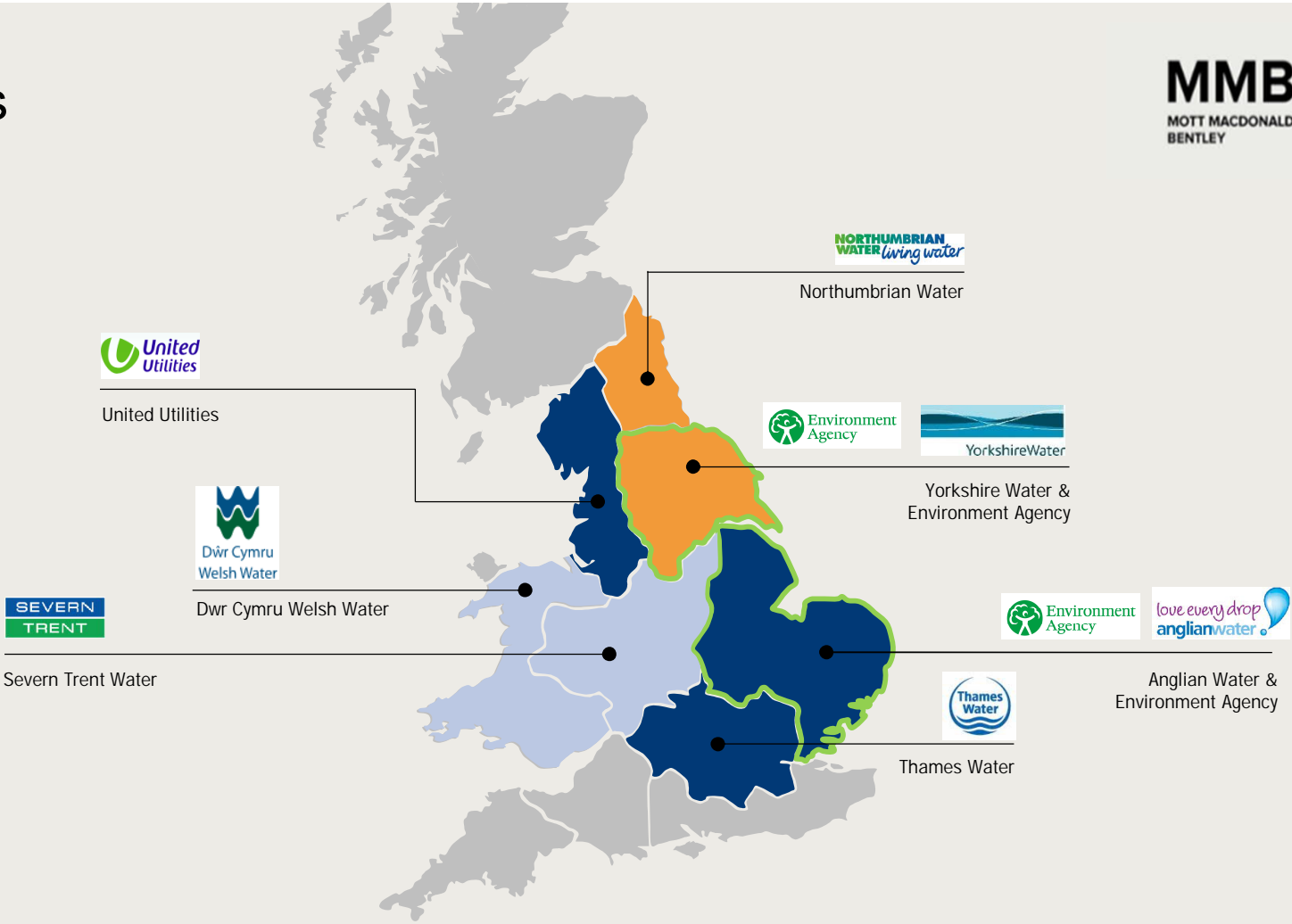
- Environment
- Utilities
- Highways
- Commercial
- Other
- Waste

Our clients



Nationwide

- Coal Authority
- P&G
- Environment Agency
- RR
- nationalgrid
- Cadent
Your Gas Network

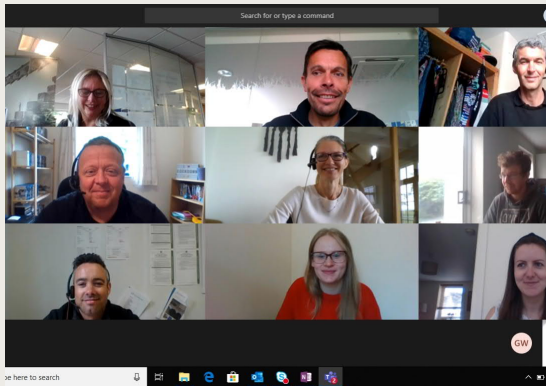


Diversity drives innovation – when we limit who can contribute, we in turn limit what problems we can solve.

Telle Whitney, *Former CEO of the Anita Borg Institute*

Our values

People and wellbeing



Mental health and wellbeing champions



Company-wide initiatives and campaigns

MMBC wellbeing

When we care about our people they are happy.
Having happy people is at the core of what we do, which means we care about the health and wellbeing of our employees.

Useful contacts

- [Steph Fergus](#)
Wellbeing Adviser
- [Mel Acres](#)
People Development Manager

Useful links

- [MMBC Wellbeing Yammer](#)
- [Document Library](#)

What is this Compass site for?
Here you'll find lots of relevant and helpful information and resources to support your health and wellbeing. We'll keep this Compass site regularly updated with new content for all JNB employees to access at any time.

- [Mental health](#)
- [Employee Support](#)
- [Line Manager Resources](#)
- [Wellbeing](#)
- [Virtual Wellbeing Noticeboard](#)
- [Wellbeing Champions](#)

Communication channels

Applying theoretical knowledge in Consultancy

My Personal Examples (2014-current)

Clean Water

- Comparison of disinfection technology; ozone vs UV to achieve the recommended (1 - 3) log reductions for *Clostridia Perfringens*
- Booster chlorination gap analysis
- Feasibility of converting a service reservoir as a contact and storage tank
- Jar Testing and Pilot Plant trials of pressured direct filtration

Other Process Engineering Work

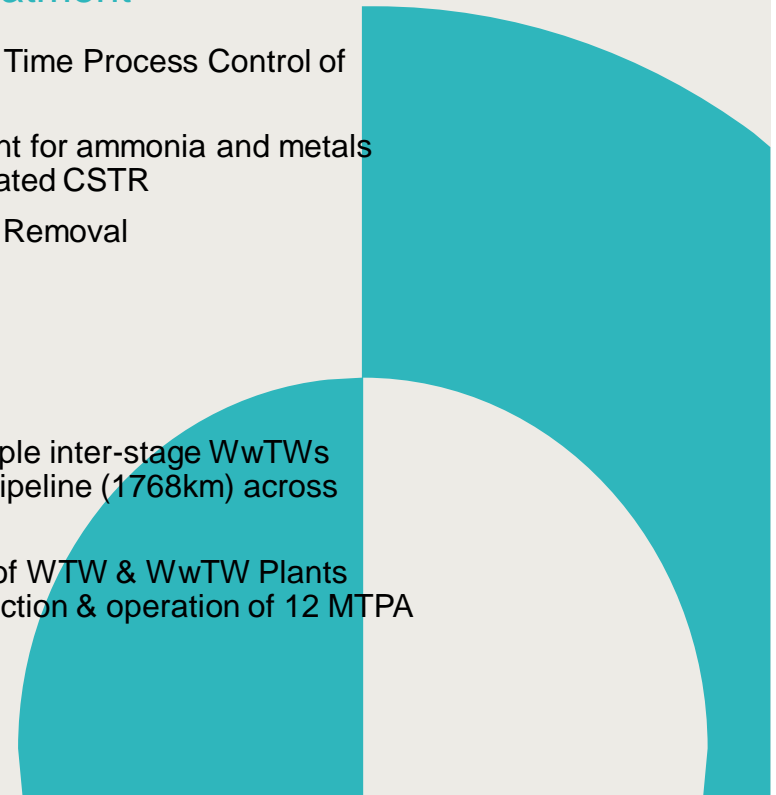
- Process Safety
 - HAZOPs and CHAZOPs
 - DSEAR
 - Functional Safety

Wastewater Treatment

- Evaluation of Real Time Process Control of Aeration
- Leachate Treatment for ammonia and metals reduction via insulated CSTR
- Biological Nutrient Removal

International

- Evaluation of multiple inter-stage WwTWs serving single oil pipeline (1768km) across several countries
- Feasibility design of WTW & WwTW Plants supporting construction & operation of 12 MTPA LNG Facility



There's a way to do it better - find it.

Thomas A. Edison

My message to future graduate Engineers

1. It is not necessary to only seek & apply for Graduate Roles
2. Be yourself i.e. *be authentic*
3. [A sense of humour is a valuable key to success at work](#)

Overcoming challenges/adversity, some of my personal tips

1. Recognize that challenges/adversity is a part of the process to SUCCESS!
 - Don't automatically internalise that because you're facing a difficult situation, you've done something wrong.
 - Self-evaluate without self-depreciation
 - Speak to someone; ask for help, support, guidance
2. View adversity as a learning experience; step back from the situation emotionally
3. Do something for someone else

Thank you

MMB
MOTT MACDONALD
BENTLEY



Image: Cardiff Bay, Wales