



Issue #6: International Women in Engineering Day Special



The Leader's Brief: Commanding with Care

June 2026 Special Edition

Dear Network,

Today is **International Women in Engineering Day (INWED)**

While the rest of the corporate internet is busy posting generic stock photos of women holding hard hats, I want to do something different. I want to tell you about an absolute powerhouse who didn't just break through the engineering glass ceiling—she completely redesigned the building.

If you want to know what it actually looks like to transition from a technical expert into a legendary, system-changing leader, you need to know the story of **Professor Judy Raper AM**.



Who She Is & What She's Known For

Judy Raper is a world-class chemical engineer specializing in fine particle technology and air and water pollution control. Her technical achievements are massive: she's won the **Chemeca Medal (2017)**, the **Ada Lovelace Medal (2018)** for the most prominent female engineer in Australia, and was named an **Order of Australia Member (AM) (2019)** for her contributions to engineering and leadership.

But Judy didn't just stay in the lab. She stepped into institutional leadership and started collecting "firsts" like trading cards:

- She became the **first female Dean of Engineering** at the University of Sydney.
- She ran the National Science Foundation's chemical and transport systems division in the US.

- She spent a decade transforming the research ecosystem at the University of Wollongong, driving a 228% increase in funding.

In fact, she is such a force for female empowerment that UNSW literally named an annual award after her: *The Judy Raper Award for Leadership*.

What She Does for Up-and-Coming Engineers

Judy's real legacy isn't just her own resume; it's how fiercely she advocates for the next generation of technical minds. She realized early on that the traditional way of teaching engineering was broken, exclusionary, and completely detached from real-world execution.

Here is how she changed the game for up-and-coming engineers:

1. Putting Fresh Talent on Real-World Problems

When she took over as Dean at Sydney University, she revolutionized the undergraduate curriculum by introducing the **Advanced Engineering Program**. Instead of forcing first-year students to sit through months of mind-numbing theory before touching a project, she threw them into solving messy, complex, real-world engineering problems in their very first semester.

2. Creating TEDI-London (The Ultimate Disruptor)

In 2019, Judy moved across the world to become the founding Dean and CEO of **TEDI-London** (The Engineering Design Institute). Her mission? To attract more diverse, creative-thinking students into STEM who might normally be turned off by rigid, old-school lecture structures.

Judy summarized her philosophy on up-and-coming engineers perfectly when she said:

"Employers are crying out for graduates who have greater skills than just the ability to solve a differential equation. They want people that can look at problems through a practical lens and come up with solutions that work, not just on paper, but in real-life, for people."

The "Commanding with Care" Lesson for You

If you are an emerging female leader in STEM or heavy industries, Judy's career offers the ultimate blueprint for your own career progression.

She didn't gain her immense professional authority by quietly putting her head down, staying in a neat technical box, and waiting to be noticed. She gained it by **challenging the status quo, prioritising real-world operational impact over academic ego, and pulling other women up behind her.**

You cannot lead a high-performing team if you are too afraid to look at an outdated corporate process and say, "*We are changing this.*" True leadership requires the grit to change the system, protect your team's focus, and step into your authority with absolute care.

Happy International Women in Engineering Day to every woman analysing the data, leading the site teams, and rewriting the rules of the industry.

Until next month, lead with clarity.

Coach to New and Emerging Female Leaders Specialising in STEM Industries

Nikki McNicol

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