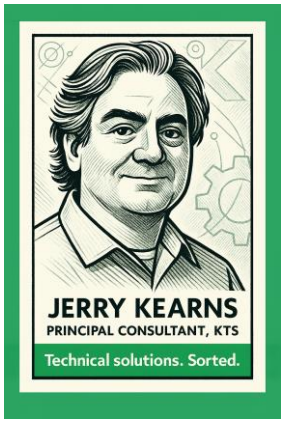
KTS NEWSLETTER

Issue number 4 **Kearns Technical Solutions Ltd** *January 2026*



KTS LATEST – New Year, New Energy

The Christmas / New Year period is traditional family time for us here at KTS, and 2025 was no different. A time to rest, and re-charge the batteries for the year ahead.

So, here I am – energy levels at 'full' – and wishing the same for all subscribers and casual readers alike.

This issue of the KTS Newsletter aims to put a spring in your step at the start of the year. The first section will raise a smile, with a light hearted look at the KTS mascot, Buzz, and his family over the years. Then, we highlight a rare glimmer of light for those in the North Sea service sector. Our regular Market Watch section picks out three tips for 2026 and explains a little bit of jargon. Finally, in the maths corner, imaginary numbers come up with real solutions. I've also added a reference section at the end, if you would like to look up previous issues or access the KTS document library.

Contents:

NEW YEAR SPECIAL: Festive cheer

To kick off the new year, KTS are happy to share some pictures from Buzz's family album.

Buzz, the KTS mascot, has a long and distinguished pedigree. The earliest recorded mention of one of his ancestors is from the Doomsday book, where a certain Sir Buzz de Russell is noted as an architect on one (and possibly only one) of William the Conqueror's early castles.

Of less certain attribution is this oil painting, which Buzz insists is his distant ancestor, Jan van Ruusell, who apparently made, and lost, a fortune in the *Tulip Mania* in Holland in the 1630's. Personally, I have my doubts. I'm not even sure it's an original painting …

And alongside that, we have a picture of Buzz's 30x great-grandpaw (on his mother's side), the legendary Dog Holliday. He was one of the survivors of the Dogfight at the O.K. Corral, where his knowledge of parallax and geodesics served him well.

Buzz Aldrin, who will be 96 years old this January, is currently the oldest living astronaut and, famously, the second man to set foot on the moon. Less well known is Buzz "Dog" Russell, who was the second canine in space. Here he is on the moon, placing a special tribute to his predecessor. I'm not sure what the exact family relationship is to my Buzz, but surely the name isn't just a coincidence.

Buzz, himself, started out as a sheep dog, where his mathematical abilities were spotted early:

This soon led to opportunities in academia:

Buzz's brief career as a maths examiner ended abruptly. He still doesn't know why, though, as he always gave 110%.

His transferrable skill-set, soon marked Buzz out for a job in the city, where he is still spoken of in hushed tones:

There was a young trader on Wall Street

Who thought dot.com stocks were so sweet.

He went in at the top,

But the bubble went pop —

Then he traded his fund for a treat.

Of course, careers in finance are notoriously demanding, and if Buzz's tenure was somewhat meteoric, still, he was inappropriately happy to have outlasted at least one of his ex-bosses.

Not everyone has a straight career path, and that is certainly true of Buzz. But, having worked with some of the most famous in the business, it's perhaps not really a surprise that Buzz ended up as a cartoon dog.

For contractual reasons, I can't say too much about this last picture, but clearly Buzz has aspirations beyond mere character acting.

INDUSTRY REVIEW: CB&I comeback offers lifeline for Petrofac

🛢️ Oil & Gas

2025 was generally perceived to be the worst year for the North Sea oil and gas sector since ever, with exploration and investments at historic lows. That said, gas still accounts for over **25% of UK electricity generation**, rising to **55% on low-wind days**, and it was interesting to note that around **10,000 offshore oil and gas workers** spent Christmas and New Year on rigs around Britain's coasts.

Petrofac rescue deal

This one is interesting.

- Engineering service company Petrofac have staggered from crisis to crisis over the last few years, culminating in fines, huge losses, and debts.
- They weren't the first and they won't be the last. This was the exact business model that Wood Group followed. And remember **CB&I**? They were bought in a fire sale by McDermott's not that long ago.
- What you may have missed, is CB&I being spun off again by McDermott's in 2024.
- And now, none other than this re-incarnation of CB&I have acquired the Asset Solutions business from Petrofac (minus the debt) on Christmas eve, securing around 3,000 UK jobs. Welcome back!

📈 MARKET WATCH

Before introducing my top tips for 2026, I just wanted to give a bit of a gloss on one of the terms sometimes used when discussing corporate valuations.

The Moat

Warren Buffett, who is reputed to know a thing or two about investments, coined the term economic moat. What he was doing was putting a name to one of the most enduring principles in investment strategy. Just as a physical moat served as a protective shield around medieval castles, so an economic moat shields a company from competitors, preserving profitability and market share over time.

What Is an Economic Moat?

An economic moat refers to a **sustainable competitive advantage** that makes it difficult for rivals to erode a company's position. Valuation isn't just about current earnings — it's about the durability of those earnings. Companies with wide moats tend to:

1. Deliver **predictable cash flows**, which investors prize.
2. Command **higher valuation multiples**, as their competitive edge reduces risk.
3. Sustain **returns on invested capital (ROIC)** above their cost of capital for decades.

This advantage can take many forms:

Brand Strength: brands that command loyalty and pricing power like Apple or Coca-Cola.

Switching Costs: ecosystems that make it costly for customers to switch.

Network Effects: entrenchment in the market place enhances accessibility to customers.

Cost Advantages: Economic scale may allow a company to undercut competitors.

Intangible Assets: Patents and regulatory licenses create barriers to entry for rivals.

The Investor's Perspective

For investors, identifying companies with durable moats is key for long-term success. For managers, building and widening that moat—through innovation, customer loyalty, and operational efficiency—is the ultimate defence against competitive erosion.

And having said all that, here are my first three UK picks for 2026:

	Company	Industry	Share Price (6 Jan 2026) (£)
1	Croda International Plc (CRDA)	Chemicals	27.42
2	Taylor Wimpey (TW)	House Building	1.07
3	Persimmon PLC (PSN)	House Building	13.60

In this issue, I will give some analysis of the valuation of Croda International, and will look at Taylor Wimpey and Persimmon in future issues.

Why Croda Has Strong Investment Appeal

1. Pharma Leadership

Croda Pharma supplies **specialist chemicals** for biologics and advanced drug formulations. It has recently expanded its UK manufacturing facilities to boost production in biopharmaceuticals, positioning Croda as a trusted partner in the growing biologics sector.

2. Agricultural Innovation

Through its **Plant Impact** division, Croda develops **biostimulants** that improve crop resilience and yield, aligning with global sustainability trends and food security needs.

3. Diversified Portfolio Operates across multiple markets: healthcare, crop care, personal care, and industrial applications, reducing risk and providing exposure to high-growth sectors like life sciences and sustainable agriculture.

4. Sustainability & ESG Focus

Croda has committed to climate-positive and land-positive initiatives —appealing to ESG-conscious investors (Environmental, Social, and Governance – i.e. “ethical” investment).

5. Global Reach & R&D Strength

Multiple UK manufacturing sites and innovation hubs, including partnerships with universities for formulation science, and a strong global footprint ensures resilience and scalability.

Investment Considerations

- Croda is a **long-term growth play** in speciality chemicals, pharma excipients, and sustainable agriculture.
- It benefits from megatrends like biologics, food security, and ESG investing.
- A £100M cost-saving programme aims to restore margins and improve cash flow by 2027.

- Risks include exposure to raw material costs and regulatory changes, but its innovation-driven model provides a strong moat.

What the analysts are saying about Croda International Plc

Croda's current share price is around **GBX 2,742**, but several valuation models suggest it could be trading below its fair value:

  - **Discounted Cash Flow (DCF) estimate**: Fair value around **£36.55 vs current £27.42**, implying **20%+ upside**.

- Despite this, some intrinsic value models (e.g., GuruFocus) show Croda as **overvalued**, so opinions vary depending on methodology.

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2. Recent Share Price Weakness

- Croda's stock has fallen **40–65% from its post-pandemic highs**, largely due to:
  - Inventory corrections in **Consumer Care** and **Crop Protection**.
  - Sluggish demand and margin pressure in 2024–2025.
- This cyclical decline creates potential entry points for long-term investors.

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3. Strong Fundamentals & Defensive Qualities

- Croda operates in **high-margin, defensible markets** like pharma excipients and sustainable crop solutions.
- Gross margins remain robust at **~45%**, among the best in the sector.
- Dividend yield is attractive at **~4%**, with a 34-year track record of uninterrupted payouts.

Bottom Line

Croda looks undervalued to me **relative to its long-term potential**, if you consider that:

- Current weakness is cyclical, not structural.
- ESG-driven innovation and pharma exposure will drive future growth.
- Dividend sustainability and margin resilience provide downside protection.

BUZZ'S MATHS CORNER: The Mystery of i

The square root of -1 baffled mathematicians for centuries. No real number squared gives a negative result, so early thinkers simply avoided such cases. The concept of an imaginary unit, denoted as i, (where, $i^2 = -1$) emerged in the 16th century, with pioneers like **Cardano**, and was later formalized by **Euler** and **Gauss**. (The term *imaginary* was introduced, somewhat dismissively, by **Descartes** in a work of 1637, in which he suggested these numbers were "impossible" or "fictitious.").

Mathematicians use i in the construction of *complex numbers* of the form $a + bi$, blending real and imaginary parts.

Complex numbers aren't just abstract, however, they're essential in engineering, physics, and even quantum mechanics. They also give us one of the most elegant formulas in mathematics, **Euler's Identity**, which links five fundamental constants: e, i, π, 1, and 0:

$$e^{i\pi} + 1 = 0$$

Example: A Real Solution via a Complex Detour

Consider the cubic equation:

$$x^3 - 15x - 4 = 0$$

Using Cardano's formula to find the roots of this equation forces you through complex numbers — even though the final answers are real. This is called the **casus irreducibilis** (what Buzz calls the invisible squirrel).

Steps:

1. With $p = -15$ and $q = -4$, the equation is already in the standard (depressed) form
$$x^3 + px + q = 0$$
2. The discriminant, as defined below, tells us something about the equation:
$$\Delta = \left(\frac{q}{2}\right)^2 + \left(\frac{p}{3}\right)^3 = 4 - 125 = -121$$
A negative discriminant implies there are three real roots.
3. We now apply Cardano's formula:
$$x = \sqrt[3]{-\frac{q}{2} + \sqrt{\Delta}} + \sqrt[3]{-\frac{q}{2} - \sqrt{\Delta}}$$

Now,

$$\Delta = -121$$

So,

$$\sqrt{\Delta} = \sqrt{-121} = \sqrt{121 \cdot (-1)} = \sqrt{121} \cdot \sqrt{-1} = 11i$$

Hence,

$$x = \sqrt[3]{2 + 11i} + \sqrt[3]{2 - 11i}$$

Buzz was up all night figuring the next bit, and it's a bit circular, because all that's happening here is a demonstration that this solution works:

Let $u = \sqrt[3]{2 + 11i}$ and $v = \sqrt[3]{2 - 11i}$. Then $x = u + v$.

Now, $u^3 = 2 + 11i$ and $v^3 = 2 - 11i$.

Also, $uv = \sqrt[3]{2 + 11i} \cdot \sqrt[3]{2 - 11i} = \sqrt[3]{(2 + 11i) \cdot (2 - 11i)} = \sqrt[3]{4 + 121} = \sqrt[3]{125} = 5$.

We then use the identity

$$(u + v)^3 = u^3 + v^3 + 3uv(u + v)$$

Giving:

$$x^3 = 2 + 11i + 2 - 11i + 3 \cdot 5x = 4 + 15x$$

So,

$$x^3 - 15x - 4 = 0$$

There are several ways of calculating what the actual value of the first root is (for example, using various substitutions), but you can take it from me that $\sqrt[3]{2 + 11i} + \sqrt[3]{2 - 11i} = 4$

(The other two roots, which are real, but negative, come from polynomial division using the first root, and they are $-2 + \sqrt{3}$ and $-2 - \sqrt{3}$. But we can leave all that for another day).

REFERENCE SECTION

For reference, here are links to previous issues: Issue 1 (where it all began), Issue 2, (with special feature: "Would AI lie to you . . . "), and Issue 3 (including the report on the comparison between the dot.com bubble and current AI-inspired market hyperbole).

And as an added New Year bonus, links to a couple of important documents in the KTS Specification Library: Piping Engineering Specification, and Project Execution Plan.