

INGENUITY



The Challenge



ENGINUITY is a unique and inspirational learning experience, giving participants, grouped into teams, the opportunity to compete against each other to see

WHO CAN RUN THE MOST SUCCESSFUL GLOBAL CONSTRUCTION BUSINESS

Each competing team is thrust into the same simulated 'virtual world', and are given the challenge of running their own Global Construction Business for a number of simulated years, where success is measured by key performance indicators published on a league table.

It will not be easy, with stiff competition for work, a dynamic jobs market, and external world events that can impact upon the business just like the real world.

Developing a successful business strategy is essential, as is being able to work effectively as a team, make key decisions, and solve problems as they arise.

Ultimately there can be only one winner, but everyone also wins if they can grow a successful business.





Successful Team Work



To run a successful business in these uncertain and challenging times, it is more important than ever that team members, often working from remote locations, have the communication and collaborative skills to form an effective team able to make key business decisions.

The **ENGINUITY Competition** develops and enhances these key people skills in a unique business management challenge that pits participating teams against their colleagues and peers from across the globe.



The Global Economy



A UNIQUE MANAGEMENT CHALLENGE

WORLD EVENTS INCORPORATED



Political turmoil, higher interest rates and cost of living crisis in the UK

Affects of the Russia-Ukraine war on energy supplies for the world economy

Construction work for major events, such as the FIFA 2026 World Cup in North America

Continued civil unrest in the Middle East

Global shortage of skilled labour

Climatic affects, such as extreme hot weather, flooding etc

Using a sophisticated computer simulation, competing teams are given the task of managing a fledgling UK-based **GLOBAL CONSTRUCTION BUSINESS** from 2024 onwards.

Operating in a dynamic global economy based upon the 'real world', there are **WORLD EVENTS**, economic, political and environmental, that can impact upon the business, and the **ENGINEUNITY NEWS NETWORK (ENN)** provides the latest world news headlines.

There are jobs, clients, rival competitors, risks and people worldwide, and the **success or failure of the business** depends entirely on the decisions each team makes in a number of key business areas.



Information is critical for re-evaluating business strategy, and world news, based upon current and future world events, is available from **ENN**, the **ENGINEUITY NEWS NETWORK**.

Enginuity News Network
Period 5

ENN

WORLD NEWS

2024 (Q1)

Jan - Mar

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ECONOMIC

At the UBS Australasia Conference in November 2023 the outlook for the Australian economy was a major discussion topic. The conclusion was that GDP growth was expected to be below trend over the year ahead, at around 3.5%, mainly due to subdued growth in household consumption as a result of cost-of-living pressures, higher interest rates and higher tax payable.

However as with many other advanced



CONSTRUCTION

Established over 10 years ago, Delhi-based Dynasty Consulting have very quickly built up an excellent reputation, particularly in Asia, but also further afield, for giving their clients a commercial advantage on their construction projects.

The company are specialists in the water & sewage sector, and offer construction planning, time and risk analysis, build ability and methodology advice. They are backed up by a dedicated and professional



POLITICAL

While concern over the humanitarian crisis in the Gaza Strip mounts, another undercurrent of alarm is growing in Washington and other Western capitals that Israel's bombardment of Gaza could spread into a wider regional war, one involving regional superpower Iran or its proxy forces.

"There's a real risk of escalation", commented the the director of the Middle East and North Africa program at Chatham



CONSTRUCTION

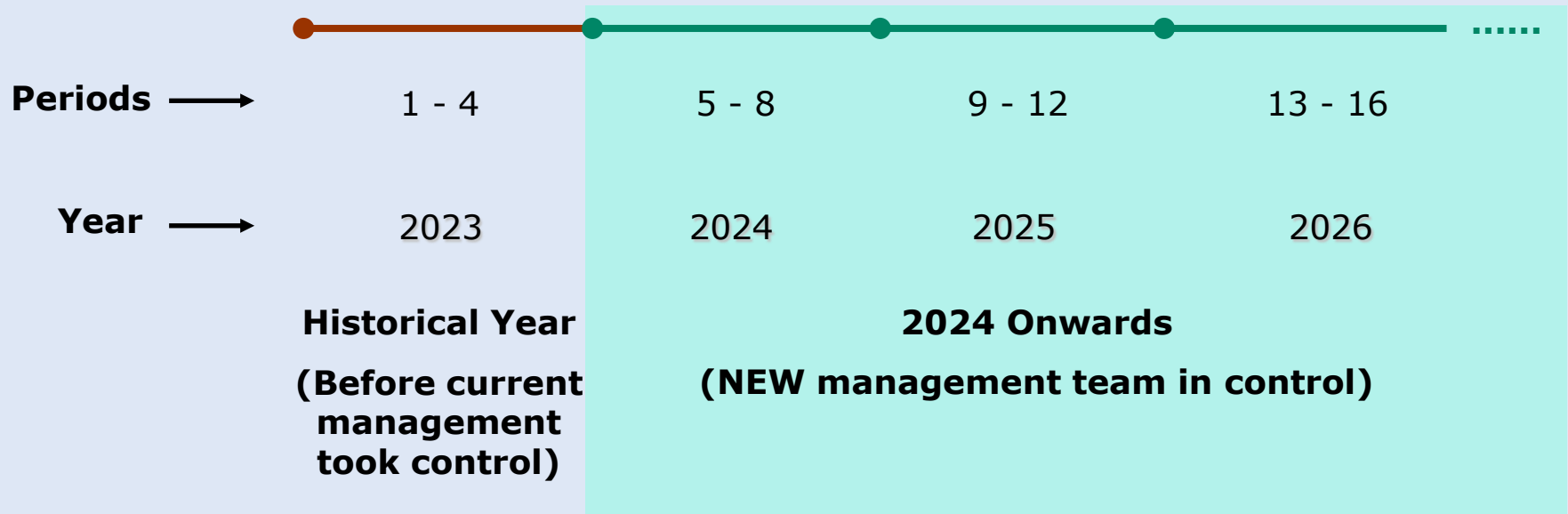
First Wind USA, who supply nearly 2% of the electricity generated in the United States, all of which is renewable, are about to announce plans for an 11m project to replace onshore wind turbines on the outskirts of New York, and suitable contractors will be invited to bid for the 9 month contract in the second quarter of 2024.



Decision Making



Decisions are made for a **period**, representing 3 months, or a quarter, in the real world.





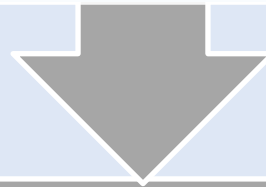
Stages of Management



The new management team will be making their first decisions for period 5 (2024 Quarter 1), and then for subsequent periods (6,7 etc) involving **further timeframes**.

Early Years

The **competition for jobs comes from a number of simulated companies**. Each one has their own unique profile and bidding history, and a careful assessment of the opposition is required to formulate an effective procurement strategy.



Later Years

During the later years the **teams compete against each other for work**. This creates an even more uncertain and pressurized environment in which the skills and team dynamics formed in the early years are really put to the test.



Making Decisions (Core)



IDENTIFYING NEW WORK

The company will not grow without new work.

The Marketing Department identify new jobs that the company can bid for in different :-

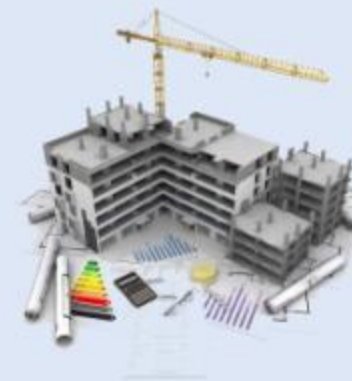
- Locations (UK/Overseas)
- Sectors
 - Industrial
 - Building & Commercial
 - Transport
 - Energy
 - Water & Sewage



WINNING NEW WORK

The Procurement Team bid for jobs identified by the Marketing Department, which involves :-

- Assessing the bidding strategies of rival competitors
- Identifying risks and costs, and setting margins to bid competitively



PROGRESSING JOBS

Jobs secured need to be successfully completed by the Construction Team.

This involves :-

- Allocating appropriate resources to progress jobs, such as project managers and labour
- Effective risk management
- Overcoming problems that occur during the construction, such as job delays



Making Decisions (Corporate)



SHAREHOLDERS

The company is owned by shareholders who expect a return on their investment in the form of a dividend.



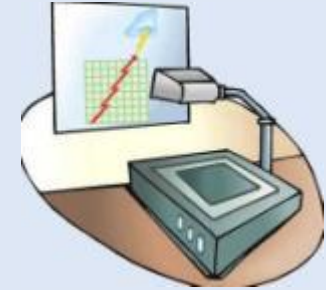
DIVERSIFYING

To reduce costs in the core business (build and risk costs), the management can invest in other companies.



INFRASTRUCTURE

To achieve enhanced growth the company's infrastructure (capital base), in the form of fixed assets such as plant, can be expanded.



OVERHEADS

Staffing the support services sufficiently will enable to company's strategy for identifying and progressing work to be carried out.

The support services departments are :-

- Marketing
- Head Office
- QHSE
- Measurement



Assessing Performance



The performance of each team each round is measured by **10 Key Performance Indicators**.

End of period	Status	Year/qtr	Turnover	Gross profit to Turnover	Operating Profit to Turnover	Company Value	Capital Employed	Contract Completion	Forward Workload	Forward Margin	Share Price	Client Satisfaction	Total
4	History	2022 (Q4)	40	170	120	170	130	80	70	100	70	50	1,000
5	Early Years	2023 (Q1)	59	203	199	190	161	114	115	160	94	76	1,371
6	Early Years	2023 (Q2)	68	202	203	197	175	119	110	154	94	90	1,412
7	Early Years	2023 (Q3)	77	220	235	215	187	124	124	165	115	111	1,573
8	Early Years	2023 (Q4)	85	225	247	232	200	139	142	175	131	141	1,717

During a competition, each team's performance relative to each other is displayed on a **league table** published at the end of each round, which only shows the overall KPI score of each team.



Enginuity 2023 Competition

TEAM LEAGUE TABLE

At the end of period 8 (Early Years)

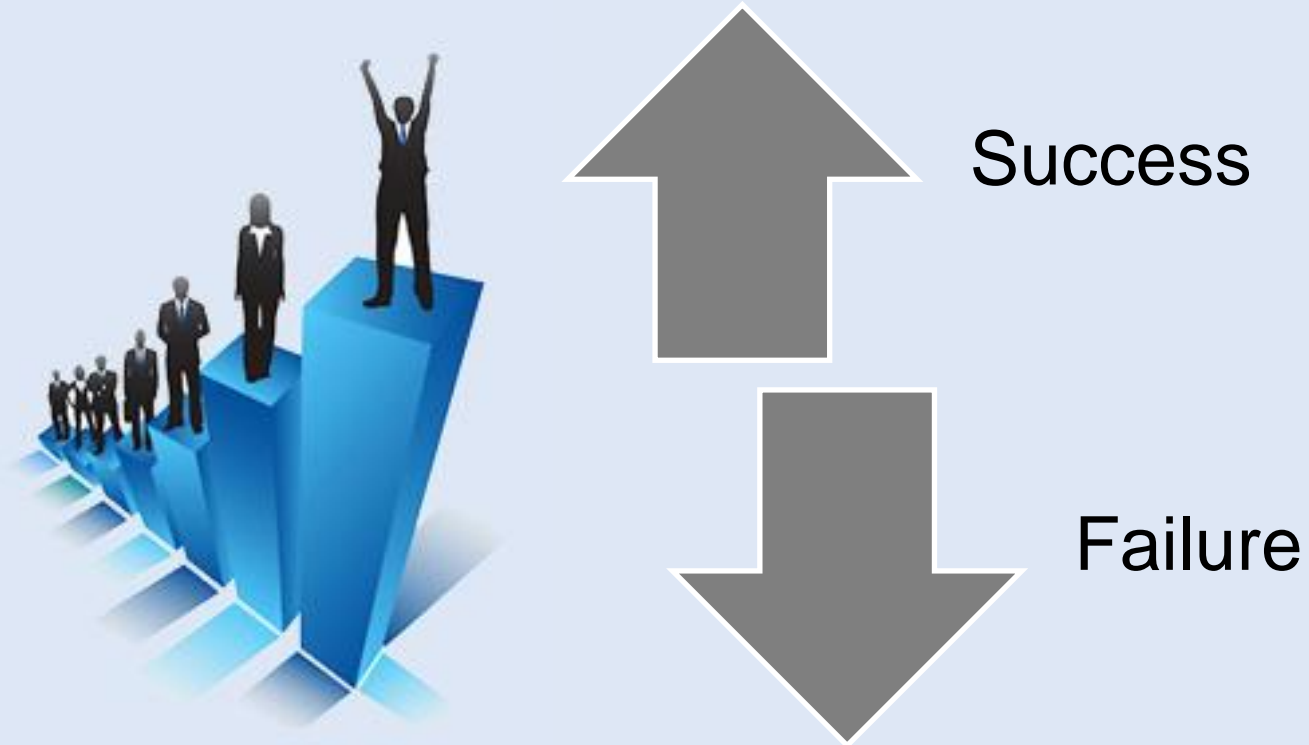
Position	Name	Sponsor	Location	Total KPI	PERIOD MOVEMENT		
					Improvement	From	Change
1	Hammer Time Co	Arcadis	Australia	1,717	9 %	2	1
2	Whatever It Takes	Stantec	Italy	1,716	11 %	6	4
3	Enginuity State of Mind	Jacobs	US	1,691	8 %	3	0
4	Glasgow ES&T	Jacobs	UK	1,688	10 %	7	3
5	briJ	Jacobs	India, UK	1,673	12 %	19	14
6	Stantgether	Stantec	Australia	1,657	13 %	32	26
7	Pixies	Stantec	India	1,651	7 %	8	1
8	Yaycobs	Jacobs	Ireland/UK	1,646	7 %	9	1
9	StanWreckers	Stantec	UK	1,633	12 %	37	28
10	Jacobites	Jacobs	UK	1,631	19 %	67	57
11	Stanchievers	Stantec	United States	1,623	4 %	5	-6
12	The Decision Box	Cundall	UK	1,604	5 %	10	-2
13	Minimum STANdards	Stantec	Australia	1,599	1 %	1	-12
14	Top Gun	Jacobs	Switzerland/UK	1,586	5 %	14	0
15	Barely Managing Globex Corp	Arcadis	Australia	1,582	11 %	46	31
16	WSP's Dream Team	WSP Australia	Australia	1,577	8 %	38	22
17	Stantec upon Tyne	Stantec	UK	1,572	16 %	75	58
18	Shark Tank	Jacobs	Poland/South Africa/India	1,571	6 %	22	4
19	HatchCon	Hatch	South Africa	1,565	7 %	34	15
20	SCART	AECOM	UK	1,563	4 %	17	-3



Success Or Failure



The fate of the company, lies in the hands of the new management team.

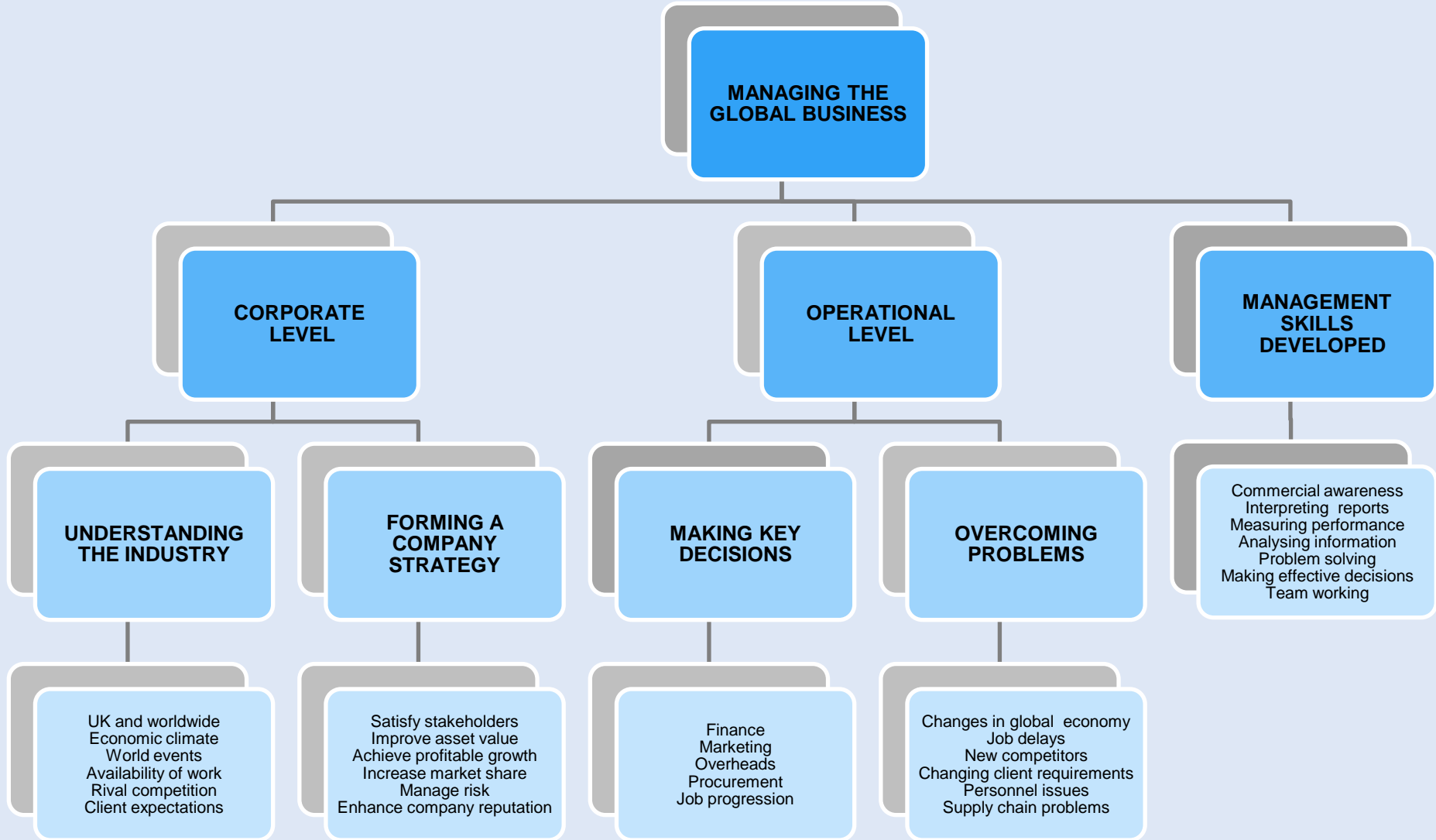




Key Features



ENGINUITY exposes participants to the key aspects of managing a global construction business.



Getting Started



ENGINUITY 2024



Participants' Module

Select Company Database

ENGINUITY 2024



Tutorial

SOFTWARE

The **Participants' Module** is the software used by participants to take part in a competition, and enables :-

- **Decisions** to be made for each period
- **Company performance** to be measured and assessed
- The **global economic environment** to be analysed

HELP TOOLS

A **set of help tools** are available to learn how to play Enginuity :-

- A detailed slideshow tutorial
- An on-line learning zone

LEARNING HOW TO PLAY

the best way to learn about Enginuity is to have a go, and there is the opportunity to practice making decisions and analysing the results, known as **trailing**, prior to the start of a competition.

A yellow sticky note with the text "Practice Makes Perfect" written on it in a black, handwritten-style font. The note is slightly tilted and has a shadow underneath.

Practice
Makes
Perfect