

# 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 THEIR CAN ONLY BE 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



Construction work for the Los Angeles Olympics in 2028

New labour government in the UK

Russia-Ukraine war

Conflict in the Middle East

Global shortage of skilled labour

Climatic affects, such as extreme hot weather

Using a sophisticated computer simulation, competing teams are given the task of managing a fledgling UK-based **GLOBAL CONSTRUCTION BUSINESS** from 2025 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.



# World News



**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**.

Engenuity News Network
Period 5

ENN

WORLD NEWS

2025 (Q1)

Jan - Mar

**PAGE 1**



**ENVIRONMENTAL**

Weather forecasters are predicting extremely hot weather in India in the coming summer, with subsequent delays to construction work.



**POLITICAL**

The 51st G7 Summit will be held in June 2025 in Kananaskis, Alberta, Canada.

The members of the G7 are Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

The leaders of the G7 countries are expected to discuss a number of challenges to peace and prosperity facing the global order, such as the conflict in the Middle East, the Russian invasion of Ukraine and climate change.



**ECONOMIC**

The World Bank have released a report indicating the threat of climate change on global supply chains.

Severe droughts and heatwaves could severely impact production, leading to food shortages, straining global supply chains and driving up household costs. Food shortages in some parts of the world could lead to mass migration, or even war, triggering severe political impacts in those countries that could ripple through to others.



**CONSTRUCTION**

A report on the use of technology in the construction industry has indicated that the building site of the future is going to look very different to the one we are all used to today. Instead of men in high-visibility jackets and hard hats, there are going to be drones buzzing overhead, robotic bulldozers and 3D printers churning out new structures.

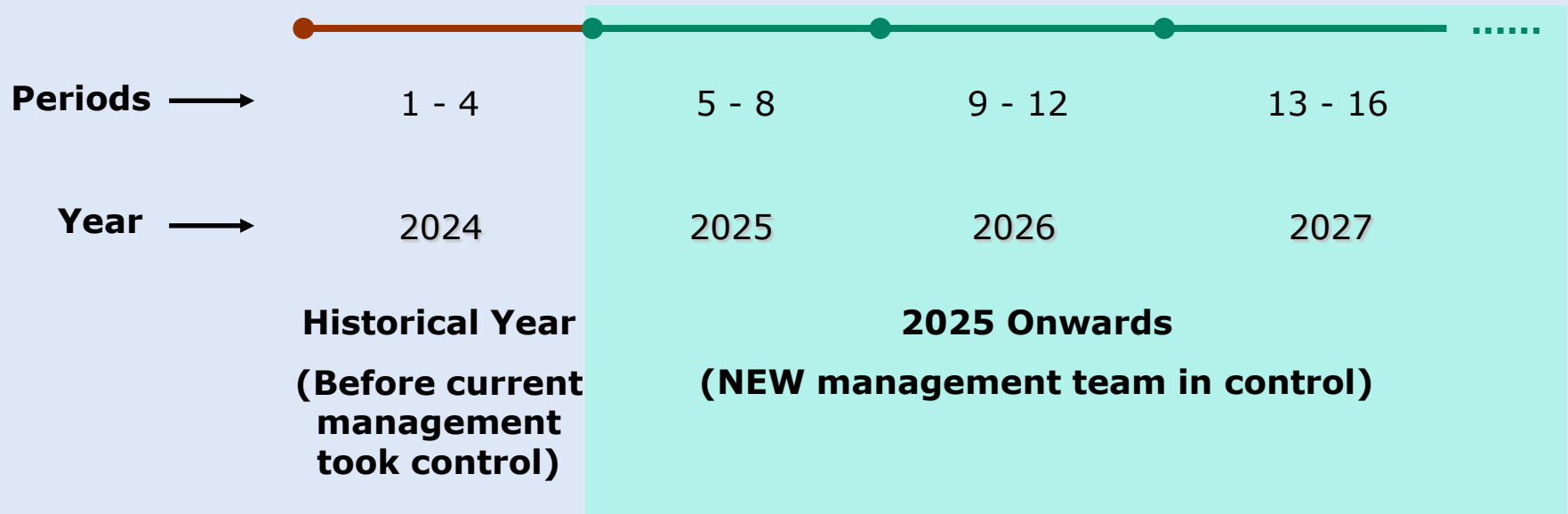
That at least is the hope of those making technological solutions. But first they have to convince the traditionally risk-averse construction industry that such change is necessary.



# Decision Making



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





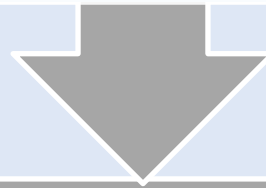
# Stages of Management



The new management team will be making their first decisions for period 5 (2025 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.

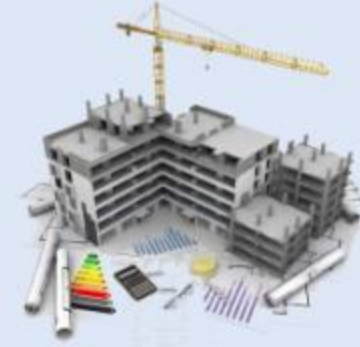


## Later Years

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.



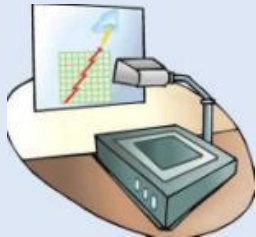
## DIVERSIFYING

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 and 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	2023 (Q4)	40	170	120	170	130	80	70	100	70	50	1,000
5	Early Years	2024 (Q1)	47	184	141	178	155	105	159	218	85	82	1,354
6	Early Years	2024 (Q2)	54	161	119	179	172	126	159	224	65	113	1,372
7	Early Years	2024 (Q3)	62	201	167	202	182	126	142	197	76	135	1,490
8	Early Years	2024 (Q4)	74	237	216	239	191	174	136	179	80	172	1,698

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 2024 Competition

### TEAM LEAGUE TABLE

At the end of period 8 (Early Years)

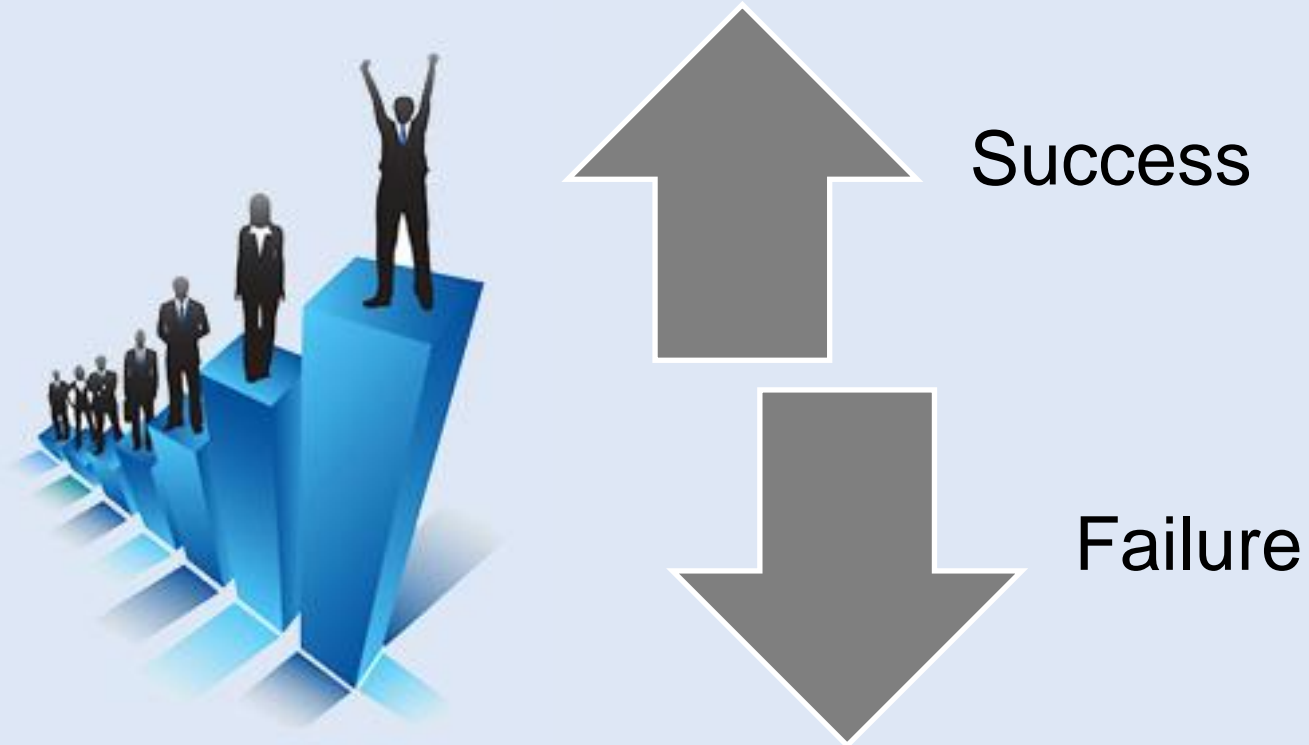
Position	Name	Sponsor	Location	Total KPI	PERIOD MOVEMENT		
					Improvement	From	Change
1	Whatever It Takes	Stantec	Italy	1,698	14 %	5	4
2	Antipodean Pavlovs	Jacobs	Australia / New Zealand	1,689	17 %	18	16
3	Stan Movers	Stantec	United States	1,689	10 %	1	-2
4	The MARTians	WSP	UK	1,659	11 %	4	0
5	Enginuity State of Mind	Jacobs	United States	1,658	12 %	7	2
6	Constructive Chaos	Arcadis Australia Pacific	Australia	1,645	11 %	9	3
7	Powerhouse	Jacobs	UK / Ireland	1,636	11 %	12	5
8	BOMBAY ALLIIBAY SQUAD	Jacobs	India	1,630	10 %	10	2
9	SiX GoLdZZ	University of Manchester	UK	1,626	22 %	59	50
10	The Mighty Turtles	Parsons	United States	1,620	7 %	3	-7
11	Fanatics	AtkinsRealis, India	India	1,617	6 %	2	-9
12	Astra Engineering	Jacobs	UK	1,600	8 %	11	-1
13	Stantrix	Stantec	India	1,599	20 %	61	48
14	The Mavericks	Stantec	United States, Canada	1,596	13 %	31	17
15	Stantgether	Stantec	Australia	1,589	11 %	20	5
16	Infraco Invasion	Infraco Consulting	UK	1,581	11 %	21	5
17	Boiled beans	Jacobs	India	1,580	8 %	13	-4
18	Lightbulb Moment	Jacobs	UK / India	1,574	18 %	64	46
19	StanWreckers	Stantec	UK	1,557	10 %	25	6
20	Stantec Stallions	Stantec	UK	1,556	25 %	98	78



# Success Or Failure



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

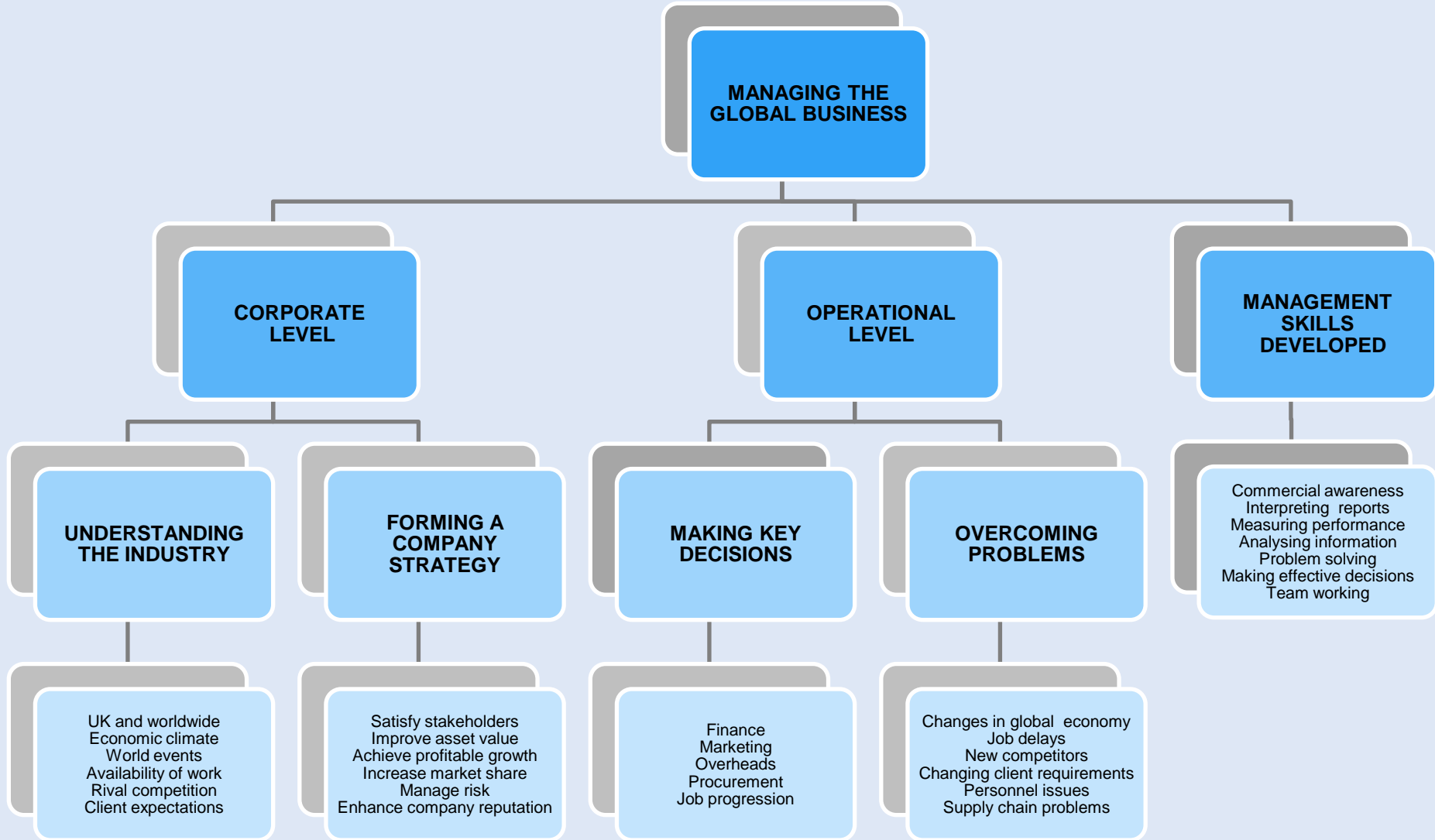




# Key Features



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



# Getting Started



## ENGINUITY 2025



Participants' Module

Select Company Database

## ENGINUITY 2025



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 pinned to the background with two yellow tabs at the top.

Practice  
Makes  
Perfect