

# INGENUITY



**Using on Company Graduate/Management  
Development Programmes**



# Introduction



People are the key asset of any business, and their personal and professional development is essential to the success of the business.

In house and external training programmes, such as Graduate and Management Development Programmes, provide a means to equip people with the technical skills needed to undertake their own jobs, but how often do they have the opportunity to **acquire an understanding of the challenges and decisions that face their corporate management on a daily basis ?**

**ENGINUITY** competitions provide management and leadership training that is relevant and appropriate for today's construction professionals worldwide, particularly those in the early stages of their careers.

Using a sophisticated computer simulation, competing teams are given the task of managing a UK-based global construction business, with jobs, clients, competitors and people across different continents and countries, resulting in unique challenges and opportunities, which will require some special management skills to be successful.

**Each team's progress against the other competing teams is based upon league tables based upon a number of Key Performance Indicators.**

**ENGINUITY** competitions have been used on the Graduate and Management Development Programmes of a number of leading UK Construction Businesses. Details are available on the website.



# The Task



It is the **beginning of 2019**.

A UK-based **global construction business** that has only been in existence for one year needs a **new management team** to run the company for the foreseeable future.

The company **operates in a number of sectors**, with jobs, clients, rival competitors, and people worldwide.

To grow the business the new management team will need to devise an **effective business strategy**.

Developing an effective strategy will involve acquiring an understanding of :-

- The **economic environment** in which the company is operating
- The **strengths and weaknesses** of the business as it currently stands



To implement the strategy **decisions** will have to be made in a number of key areas :-

- Financial management
- Overhead management
- Procurement
- Job progression



# Realistic Timeline



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





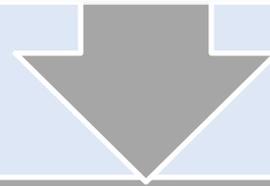
# Stages of Management



The new management team will be making their first decisions for period 5 (2019 Quarter 1), and then for subsequent periods (6,7 etc) using **2 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 ("Head to Head")

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.



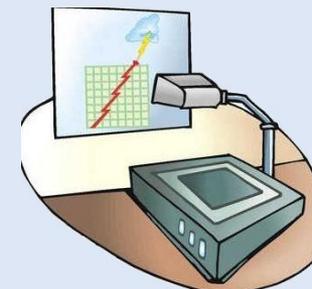
## DIVERSIFYING

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





# 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 **ENGINEUNITY NEWS NETWORK**.

Enginuity News Network X



Period 6  
**2019 (Q2)**  
**Apr - Jun**

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 <h3 style="margin: 0;">ECONOMIC</h3> <p>As demand in the US economy picks up so does the level of inflation, and leaks from the Federal Reserve Bank of the United States suggest an interest rate rise within the next 6 months, increasing the value of the US dollar against other currencies.</p>	 <h3 style="margin: 0;">CONSTRUCTION</h3> <p>Chicago Developments, a private sector initiative created in 2006 to oversee the maintenance and development of the infrastructure of the US City, are about to announce plans for a new rail link into O'Hare Airport.</p> <p>The design work has already been completed for the 19m contract, and the job is expected to last one year, and suitable contractors will be invited to bid for the work in the third quarter of 2019.</p>	 <h3 style="margin: 0;">CONSTRUCTION</h3> <p>North America Water are about to reveal plans for phase 2 of a water plant modernisation near Davenport, Iowa in the United States. The 8m job is planned to last a year, and suitable contractors will be invited to bid for the work in the third quarter of 2019.</p>
 <h3 style="margin: 0;">POLITICAL</h3> <p>Continued civil unrest in Syria's bloody five-year civil war, particularly in the northern city of Aleppo, has put foreign companies working in the country on high alert, and they are being advised to tighten up their in house security.</p>	 <h3 style="margin: 0;">CONSTRUCTION</h3> <p>A leaked internal memo indicates that Birkett Plc, a recently formed family-owned construction company operating solely in the UK, are looking to build a strong order book, and as part of this future vision they expected to bid very aggressively for the construction of a new technical centre near Aldershot for Cane and Beet Sugars.</p>	 <h3 style="margin: 0;">ECONOMIC</h3> <p>A speech in Paris by the Secretary General of the ICC, the International Chamber of Commerce, raises concerns of a rise in the global demand for electricity in the near future.</p>



# Assessing Performance



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

Key Performance Indicators													
Show graphical analysis													
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	2017 (Q4)	40	130	130	170	120	100	70	100	70	70	1,000
5	Early Years	2018 (Q1)	50	151	214	177	146	135	110	162	85	102	1,332
6	Early Years	2018 (Q2)	61	117	140	169	167	135	119	169	70	112	1,259
7	Early Years	2018 (Q3)	72	115	151	174	172	145	66	92	76	123	1,186
8	Early Years	2018 (Q4)	78	106	126	171	182	165	112	137	67	152	1,296
9	Later Years	2019 (Q1)	84	109	127	170	192	175	124	123	69	172	1,345
10	Later Years	2019 (Q2)	91	110	134	171	200	175	122	105	72	190	1,370

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.



## Lovell 2018 Competition

### TEAM LEAGUE TABLE

At the end of period 10 (Later Years)

Position	Name	Sponsor	Location	Total KPI	Improvement
1	MS Innovation	Lovell	Tamworth	1,370	2 %
2	Morgan Lovell Enterprise	Lovell	Tamworth	1,295	10 %
3	Elite	Lovell	Tamworth	1,292	17 %
4	The Purple Cobras	Lovell	Tamworth	1,187	-1 %
5	MSLP	Lovell	Tamworth	1,100	-13 %



# Team Working



Effective **team working** will be vital to ensure that the company runs smoothly.



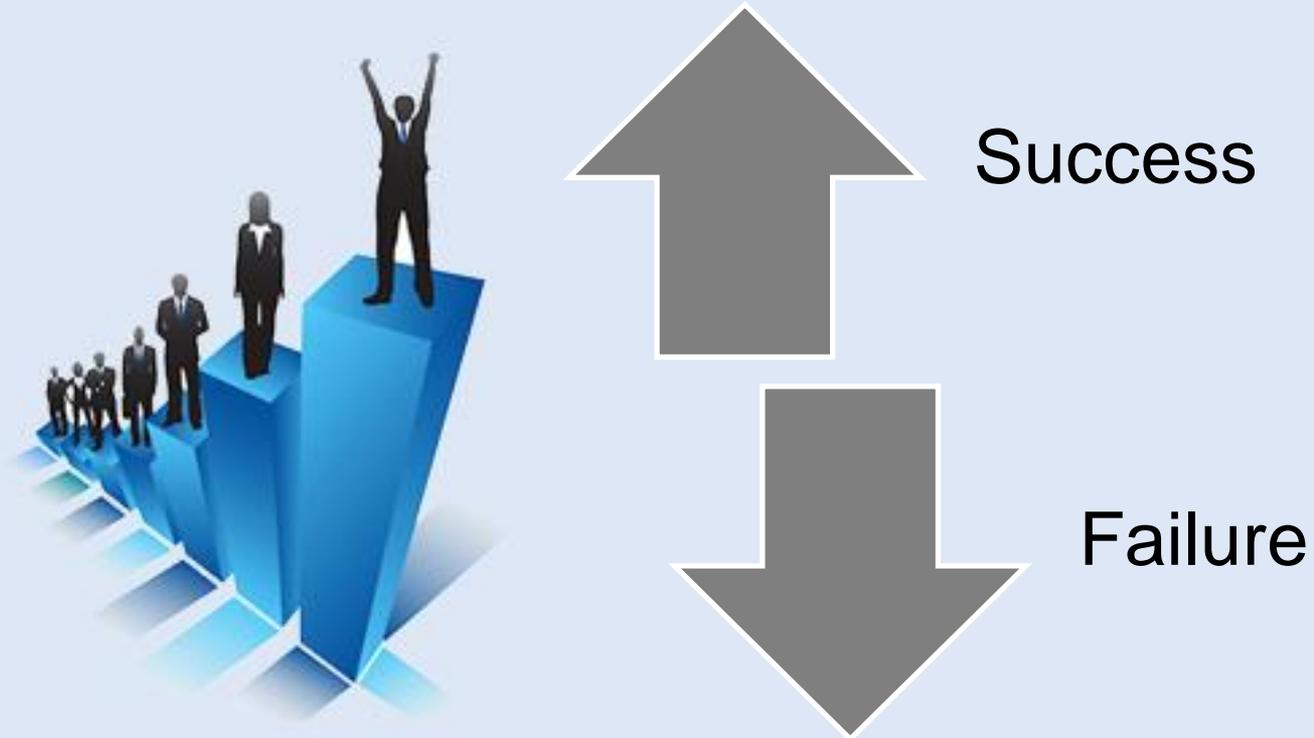
- Deciding upon the structure of the team, individual roles, and who should lead the team
- Identifying strengths and weaknesses
- Resolving conflicts as they arise



# Success or Failure



The decisions that have to be made each period, and the fate of the company, lies in the hands of the new management team.

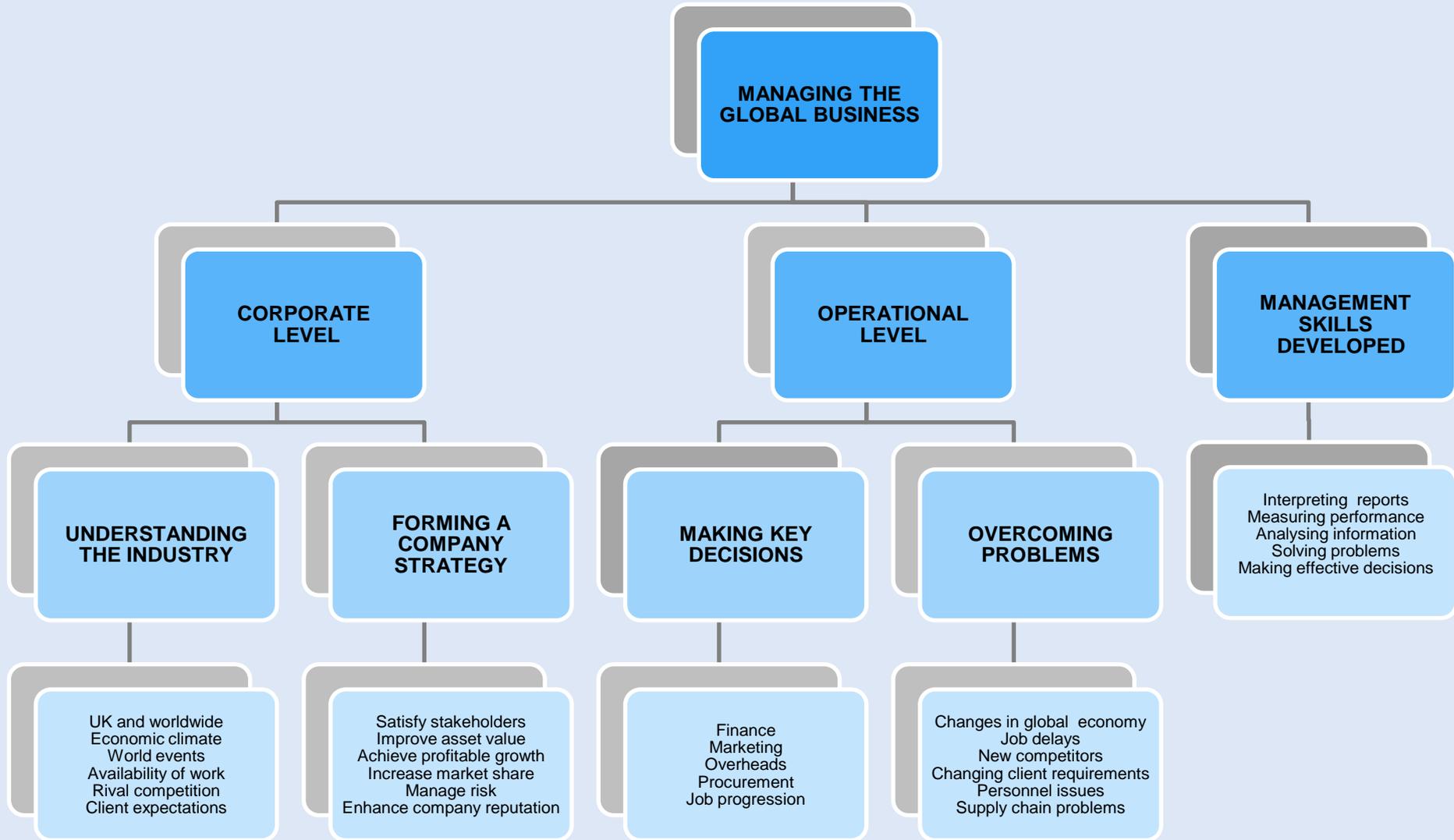




# Key Features



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





# Assessment



Having taken part in an **ENGINEUNITY** Competition, it is **important to assess** what the teams have learnt from taken part.

The assessment can be delivered in a number of ways.



A written **Business Performance Report**



A slideshow **presentation**

Whatever form the assessment takes, each team will need to describe :-

- The initial state of the company when they took over
- Their strategy for running the company during the early and later years
- A review of their performance against the initial objectives
- How their strategy was changed according to their progress
- The lessons learnt, their strengths and weaknesses, team dynamics etc



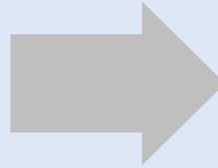
# How It Works



## Up and Running

(Pre Competition)

- Participants **split into teams**, and registered for the competition
- **Instructions, information and data** emailed to the teams to get them up and running
- Teams install the software, and have some time to practise learning how to play Enginuity, known as **trailing**
- Full **7-day support**, with detailed feedback given to the teams



## The Competition

(Local or Remote)

- A number of rounds played against computer-simulated rival companies, known as the **Early Years**
- A number of rounds where the teams compete directly against each other, 'head to head', known as the **Later Years**
- **Assessment** in a number of ways, such as presentations or business performance reports
- **Feedback** to review progress, strengths and weaknesses, and what has been learnt



# Further Information



Further detailed information can be obtained from the website at:

[www.enginuitycomp.co.uk](http://www.enginuitycomp.co.uk)

or by e-mail

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or by contacting in the first instance

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