The 2018 Competition

The theme of the 2018 GIC is "Global Issues: Student Responses".

In 2015 UN Member States adopted a set of 17 goals to end poverty, protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Each goal has specific targets to be achieved over the next 15 years. We want student teams to select one of the UN Sustainable Goals and devise a strategy and identify resources to engage a wide cross section of the student body in developing an appropriate response to the goal.

The theme is intentionally broad to allow different groups of students to interpret the topic in ways that may have most relevance for them. Students entering the competition will need to be aware of UN sustainable development agenda and goals. However, **a key guideline of which students and their ingenuity facilitators need to be aware is that the competition judges will be looking for students to present achievable projects with down-to-earth, practical solutions that could be implemented at a local level.**

In the projects, it is important that students see themselves as **agents of change** and that they **demonstrate the roles that they would play in the proposed project.** This might include how they and their colleagues would contribute to the success of a small-scale intervention that offers pragmatic solutions to immediate real-word problems on their campus and/or in their own communities.

The selected challenge may be large or small and the solution can be anything from a small student-led campus project to a larger scale social initiative, in which students can play a supporting role. The scale and scope will only become apparent during the *ingenuityonline process*: and the outcome might be a product or a service – indeed any novel, creative or innovative way of

responding to the identified challenge. It can be locally or generally applicable but it should be both radical and practical.

The proposed solution will be presented as a three-minute video uploaded to the *ingenuityonline* (IOL) website. It should be regarded as a pitch for initial funding and so the winning project will be one that identifies a real problem, proposes a novel solution, and suggests a feasible pathway to take it forward.

Once the competition ends, the individual challenges will be opened to view for all participants. It is hoped that this will enable new teams to be formed over the next year to respond to new challenges in a spirit of international collaborative problem solving.

The challenge will last two weeks at each participating institution. At the start of this two-week period, facilitators will share the specific challenge with the students, and assist them through the process. Students will have two weeks to work on the challenge and invite comments from trusted advisors; this will allow some incubation time for their ideas. Technical support will be provided by the IOL staff team during this time. We would advise that a perfectly acceptable entry, with a simple PowerPoint presentation, can be achieved in a minimum of ten hours' engagement by students on the project.

By the end of the 2-week period, local facilitators will upload a 3-minute video with their team's proposed solution to the challenge. This submission will be assessed by a judging panel made up of U21 representatives. The judges' decision will be final. Please note that videos longer than 3 minutes will be disqualified.

In addition to the main prize (US$500 for each student on the winning team), a Peers' Choice Award is chosen by students who have participated in the Challenge.

Judging criteria

- **Quality of pitch:** the most important aspect of the presentation ought to be the clarity of the argument.
- **Novelty of solution:** this is not necessarily 'new to the world' but ought to be 'new to this situation'.
- **Practicality of solution:** as a general rule, there are three types of innovation in descending order of difficulty to implement - those that require permission, those that require partners and those that can be done independently.
- **Scalability of solution:** game-changing innovations are often those that first prove themselves on a small scale.

In addition to the main award, there will also be a "Peers' Choice" award. Each participant will be able to vote for their favourite video (excluding those from their own institution). Local facilitators will collate and submit the peers' choice votes.

IngenuityOnline User Manual

Preface

ingenuityonline is a development of the creative problem solving process developed at The Haydn Green Institute for Innovation and Entrepreneurship, part of the University of Nottingham. That methodology is expounded briefly and at length in the books *Ingenuity in Practice* and *Ingenuity*. This document is an extremely short outline of the argument contained in those books with reference to the online version but, together with the explanatory videos and help facilities on the platform, should suffice for first time users. More background information about the process can be found here.

Introducing *ingenuityonline*

ingenuityonline is a digital platform which encourages users to explore challenges and to respond in a creative and effective manner. Most if not all innovations, especially in the economic sphere, can be described as problem-solving. Entrepreneurship includes a powerful element of opportunity recognition - not just bringing value by doing things better but introducing the possibility of doing things differently.

This is the distinction between incremental and radical innovations - the former is usually quite straightforward and comparatively easy to implement; the latter more often is easier said than done because they challenge the status quo.

ingenuityonline includes unique software that encourages radical thinking: the 'creative response' that characterises entrepreneurial enterprise.

"Intelligent people can juggle a half-dozen concepts simultaneously and make good decisions rapidly – and many of them seldom have a creative moment. They are so good at the standard answers and so eager to move on to the next decision that they never play around with nonstandard possibilities . . . There is such a thing as being 'too good' because, in much of life, there are no correct answers. You have to invent new ones and contemplate them for some time."

(W. H. Calvin, *A Brief History of the Mind* 2004)

Where do new ideas come from? The short answer is that they do not come from thin air: quite simply they come out of other ideas - whatever we can construct from the facts, techniques and concepts that are available to us. These ideas that we have to hand form our Contextual Knowledge Base. Our simple thesis is this: increase the base, increase the possibilities. Our studies suggest that there is rarely, if ever, such a thing as a 'great idea' that springs into being fully formed in an act of individual 'genius'. Rather, great ideas come from a combination of a bit of this idea with a bit of that idea; a reaction to another idea. Radical ideas are sometimes analogous, almost always non-obvious. The crucial point to make is that we do not know immediately which of the elements that make up a 'great' idea is a good one or a bad one - it is only hindsight that reveals quite how ground-breaking innovations come about. And so, the essence of creative thinking is the willingness to go beyond the 'obvious' - to be wrong more often than we are right. We need to resist the temptation to jump to solutions with which we are comfortable, and not rush to judgement of those that sound unfamiliar.

"You aren't going to have good ideas unless you have lots of ideas and some sort of principle of selection"

"have lots of ideas and throw away the bad ones..."

Linus Pauling

ingenuityonline has a straightforward problem solving structure:

1. **Definition**; finding root causes, understanding how problems and opportunities are constructed and interrelated.
2. **Discovery**; looking widely and imaginatively for ideas that we can engineer into creative possibilities.
3. **Determination**; deciding, using sound judgement to foresee likely consequences, turning possibilities into probabilities.

The method throughout is Socratic, posing questions and encouraging dialogue to explore problems and opportunities before constructing viable new concepts from a vastly increased contextual base. Larry Page, Google's co-founder, and CEO, once described the perfect search engine as something that "understands exactly what you mean and gives you back exactly what you want." ***ingenuityonline*** is not like that! - you cannot search in that manner for something that does not yet exist.

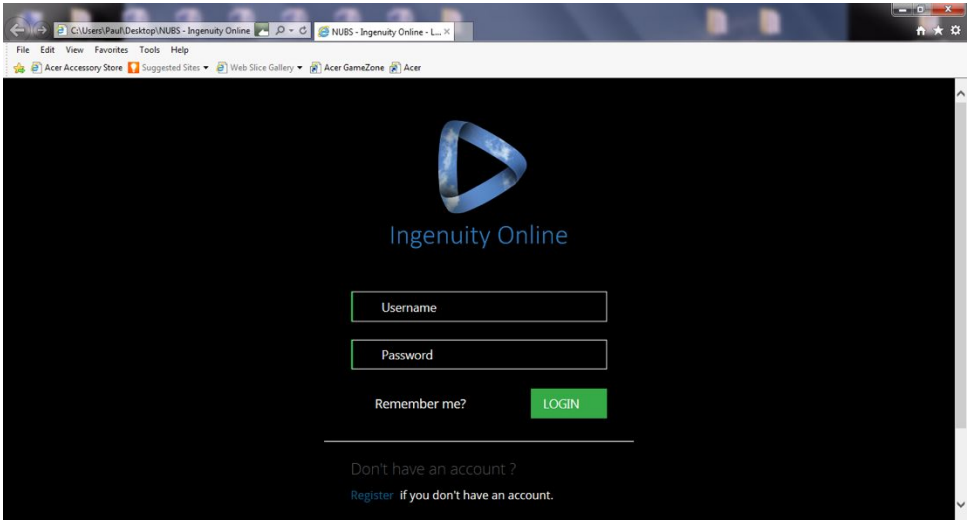
ingenuityonline encourages <u>you</u> to understand exactly what you mean and then create it for yourself. Whilst the platform shares functions which will be familiar to new users, its central purpose is not as a search engine nor an idea management platform - it is an idea creation platform.

ingenuityonline is designed to generate a large number of creative responses in a short space of time. It allows us to produce and play around with non-standard possibilities - to have lots of ideas and select and develop the

best ones. Our purpose is to improve the quality of creative concepts at the very start of the innovation process.

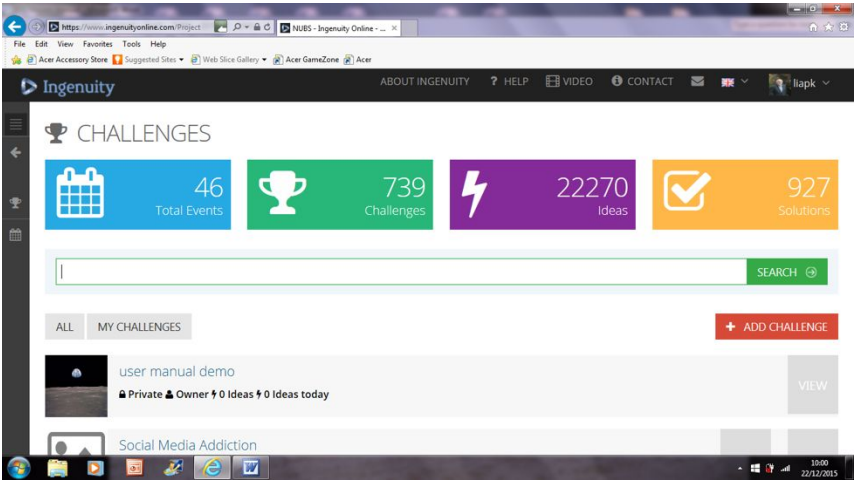
Getting started:

Go to ingenuityonline.com



Follow the onscreen instructions to register and you will see this dashboard. The dashboard will vary slightly depending on the device used; PC, laptop, tablet, or mobile phone.

**Event icon



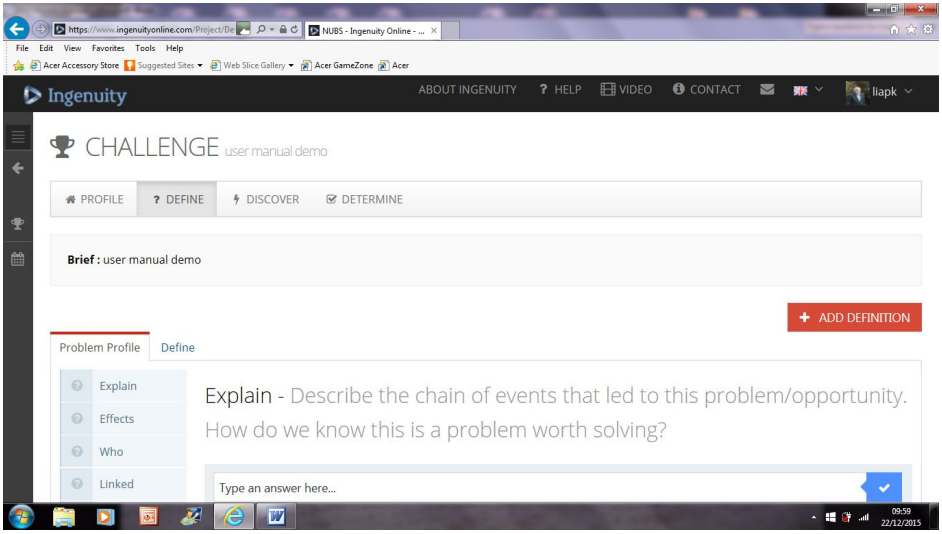
At the top of the screen, the *help* and *video* buttons let you access full instructions on how to use the platform.

The main dashboard allows you to explore current and past problem solving challenges. These public challenges can be seen in date order when you login. Challenges can also be grouped together within 'events' which can be found by clicking on the ***event*** icon. **

Within each challenge the first step is to start to define the challenge facing you. This DEFINE section is initiated by an invitation from the 'owner' of a challenge who invites discussion around the problem/opportunity. Invitations

to new users, including a link to the login page, are delivered by e-mail. Registered users will also be notified of an invitation on their dashboard: follow the instructions to join the challenge. The discussion is prompted by a series of questions. This section is all about preparation. We need to establish the facts. Where are we now and where do we want to be?

The questions appear as apps on the left hand of the screen and are a straightforward way of breaking down and analysing multifaceted situations.



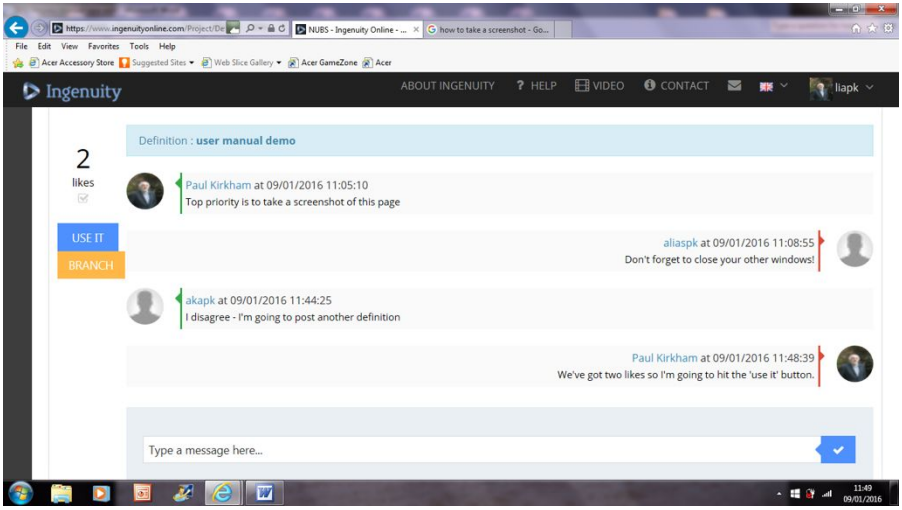
- EXPLAIN: Describe the sequence of events that led to the present situation. What brought it to our attention? How do we know it is a real problem? What is the evidence that there is an opportunity to bring value? That it is a problem worth solving.
- EFFECTS: What is the impact of the problem? Describe what will happen if we do nothing - disaster or a lost opportunity?
- WHO? List the people and organisations who are stakeholders in the problem. Positive, negative, rivals. On one hand the more people who are

interested in a solution the easier it will be to find support for your initiative; on the other, what about potential competitors?

- LINKED: What other problems need to be addressed at the same time? Complex problems are the result of a web of interrelated issues and actions which are likely to be affected by innovations in any of the elements in the wider system.
- ROOT CAUSES: What are the essential factors? The sequence of events that brought the whole issue to our attention ought to reveal the fundamental issues that need to be resolved.
- TARGET: How will we know we have reached our objective; what are the criteria for success? What are our ambitions and is there a way we can measure our achievement?
- NEXT: What are the priorities and which should we deal with first? It may be that complex problems cannot be solved alone, but we ought to be able to break them down and address them one piece at a time.

It may be that the definition stage alone points a direct route to a solution; an accurate diagnosis might indicate a routine cure and the problem disappears. If, on the other hand, there is no established solution that is good enough we are going to have to create a new one and so we need start a discussion about a problem definition. This discussion takes place online with team members adding their own comments and alternatives before agreeing on a single definition for the challenge owner to adopt with the ***use it*** option.

At this point team members, may wish to take a different definition to set up a new challenge of their own, addressing another aspect of the problem, using the ***branch*** option.

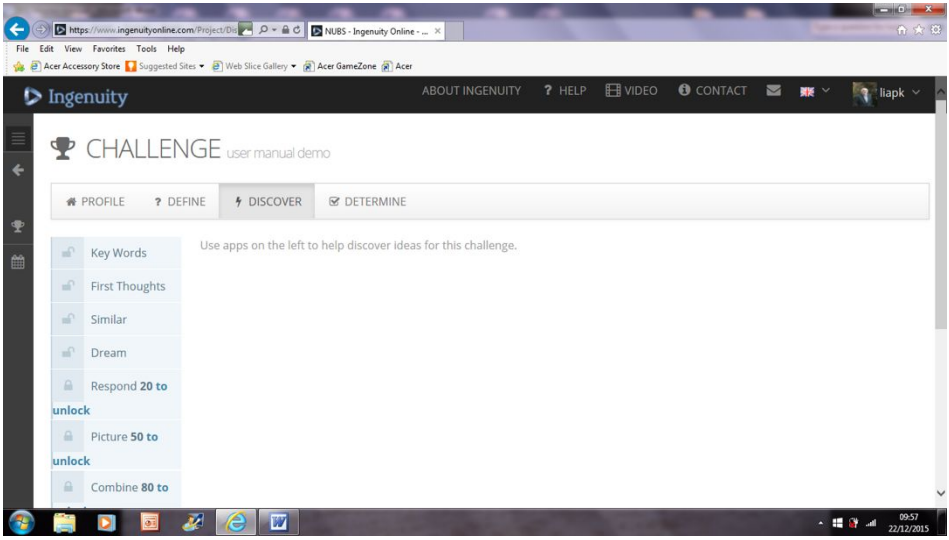


When a definition has been agreed, we go forward to try and solve the problem in the next section: DISCOVER.

DISCOVER is another series of prompts to generate a wide array of ideas from which to construct new concepts.

The essence of the methodology is to increase the range of possibilities. The greater the array of ideas, the greater will be the likelihood of putting together new and appropriate solutions. This is not a random process - the ideas produced will all contain some shred of relevance.

We can add to our repository of ideas using the apps on the left-hand side.



The first four apps have a timer – post as many ideas as you can with a clock ticking. This is deliberate - what is needed is quantity over quality and we do not want to overthink the problem - the first prompts are undemanding; entries are limited to 50 characters:

- KEY WORDS: The solution is bound to contain certain words and phrases that have been used in the define stage - for example the stakeholders and their different functions. Enter these key words.
- FIRST THOUGHTS: One of the barriers to radical thinking is a fixation on the standard answers and quick decisions - put them in here.
- SIMILAR: Look for analogies - enter ideas and solutions from comparable situations. Frame your specific problem more generally - is it one of communication? Is it one of supply and demand? There are plenty of parallels.
- DREAM: Enter as many ideas as you can - however impractical they might be - the best and the worst; the weird and the wonderful; the good the bad and the ugly. They may be more useful than they seem.

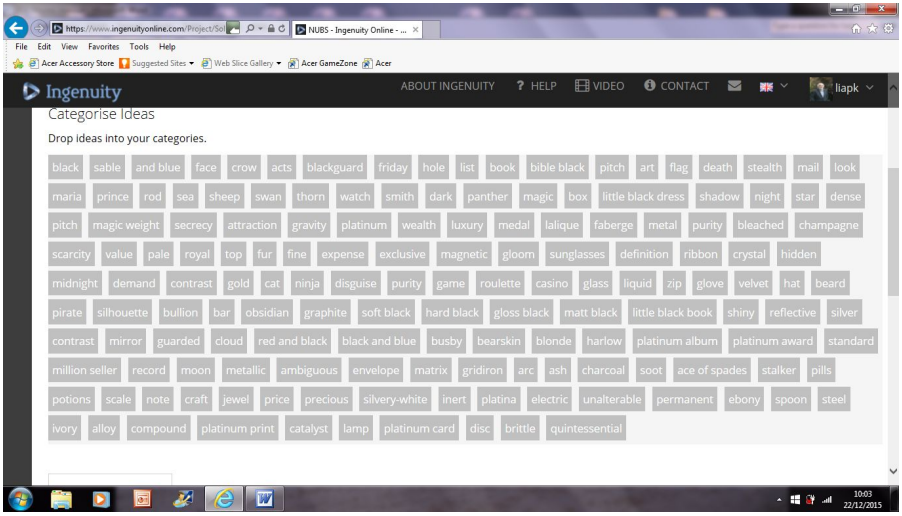
By this time there should be enough ideas posted for them to start interacting with each other. The next three apps will not open until a certain number of ideas have been posted. They are designed to encourage novel reactions and combinations to ideas already in the system. There's no timer; ideas posted should by this time be getting longer - phrases rather than single words.

- RESPOND: You are asked to respond to one of the ideas already generated by the whole team - the hint is randomly generated. Using this app can easily double the stock of ideas - if one hint doesn't spark a new idea, try another.
- PICTURE: This app presents images collected online using three of the group's ideas as search terms. Relax and scroll through whatever turns up - if they don't work, refresh and you'll see some more.
- COMBINE: This is a little harder but yields more complex ideas. Force yourself to connect two or three of these ideas into a new one.

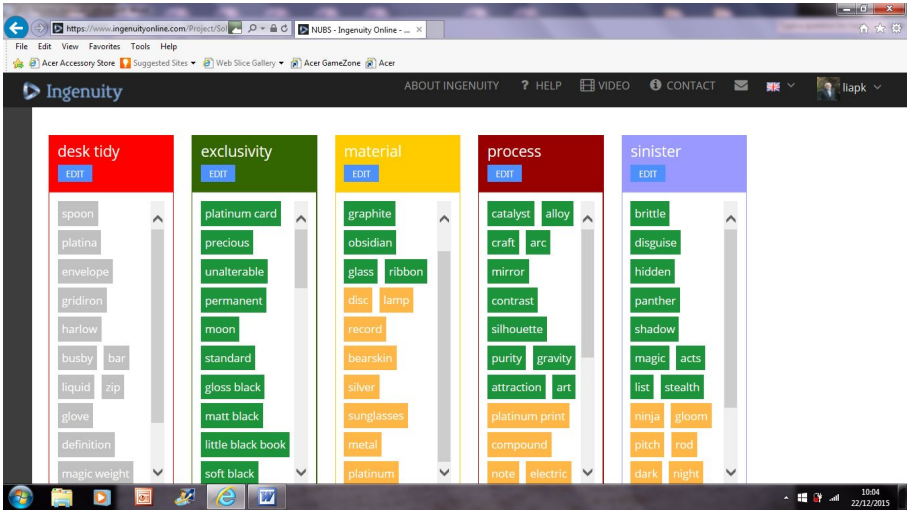
The first four apps rely on the detailed knowledge of the subject that came out of the define stage. Interestingly the last three apps can be used by anyone. It may be that fresh thinking is not constrained by close familiarity with the standard answers.

Volume is the key - quantity over quality - as a rule of thumb we have found that at least 150 ideas should be posted before radical new concepts can be expected to emerge. Once you think you have enough ideas, move to DETERMINE.

The final stage is DETERMINE - selecting the 'good' ideas from the 'lots of ideas'. All the ideas appear in a single array from which they can be dragged and dropped into categories by each participant in the challenge. Category boxes are created by clicking on the ***+*** icon and choosing the most appropriate category name.



The categories chosen are likely to include some of the key words and phrases from the define section. Once placed in categories the ideas can be graded further by choosing ***edit*** and then ***sort*** so that the best 'rise' to the top. Each participant can sort and sift the total array in any way they see fit, and as many times as they wish - nothing is thrown away, you can always start again.

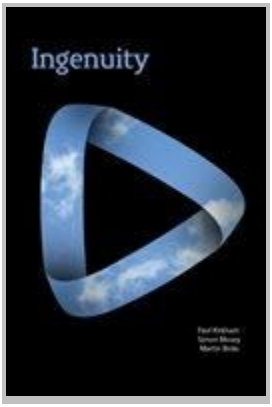


By this time radical ideas and concepts ought to have emerged and a potential solution can be posted and discussion invited. It ought to be expected that the final concept will be a modified version of one of these proto-solutions. By the end of the process we should have a practical response to the questions posed by our problem definition. If not, we will have to re-frame or re-structure our question or split it into parts and start again**. Although the process is iterative it is not repetitive.** It always moves forward either to a solution or to a deeper understanding of the problem.

Most creativity tools have been developed for use in a single place at a single time - typically by groups of participants with sticky notes and flipcharts in a seminar room. ***ingenuityonline*** was developed to allow collaboration between users who are not necessarily in the same room at the same time. The challenge can be accessed wherever and whenever an internet connection is available, whether that be from team members in different time zones or merely an afterthought captured and posted from a mobile phone. However, it is not expected that all users will limit their discussions to the platform. Preliminary work is likely to occur offline or on different social media and there is bound to come a time when solutions are better developed in a different format. We recommend that some of this work is reflected on the platform so as to leave a detailed trace that can be referred back to as and when necessary during the ongoing progress of the project.

Download our eBooks

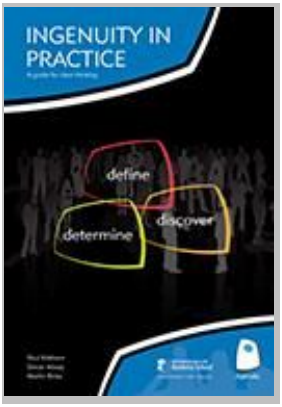
Ingenuity



amazon.co.uk

Download on iBooks

Ingenuity in Practice



amazon.co.uk

Download on iBooks

The 2018 Global Ingenuity Challenge: a contest designed to highlight the value of collaborative problem solving:

- Who? teams of up to five students drawn from U21 institutions
- What? the theme of the 2018 GIC is "Global Issues: Student Responses"
- How? using the interactive web-based platform *ingenuityonline*
- When? a minimum of ten hours' engagement for two weeks commencing March 2017.
- Why? each student in the winning team will be awarded a prize of US$500. (There are additional prizes for Peers' Choice Award and each student who participates will receive a commendation from U21). Apart from this competitive element, our expectation is that every team will produce a high-quality concept that can be taken forward as a practical project or initiative.

The event is sponsored by *Universitas 21* and will be supported and facilitated by the developers of *ingenuityonline*, The Haydn Green Institute for Enterprise and Innovation based at the University of Nottingham U.K.

Links to the previous competitions:

2017 videos

2016 videos

2015 videos

Nottingham University Business School
UNITED KINGDOM · CHINA · MALAYSIA

Haydn Green Institute for Innovation and Entrepreneurship
Jubilee Campus
Wollaton Road
Nottingham NG8 1BB

t: +44(0) 115 951 5273
e: innovation-enquiries@nottingham.ac.uk
w: www.nottingham.ac.uk/enterprise

@IngenuityOnline

IngenuityOnline

tiny.cc/linkHGI