

The KAUST Entrepreneurship Center

Presents

**The Saudi Arabian STEAM Innovation
Challenge**

***In partnership with the Dow Chemical
Company***

KAUST Winter Enrichment Program

Thursday the 19th to Saturday the 21st January 2017

Details, Schedule and Challenges

STEAM Overview

The STEAM Innovation Challenge will take place over a three-day weekend in January 2017 as part of the KAUST Winter Enrichment Program. This Challenge will involve 150+ students from KAUST and collaborating Saudi universities. Dow Chemical will be the key partner to support and sponsor the Challenge.

Dow will also be a key part of the development of the STEAM Innovation Challenge in terms of giving students real world problems to solve. A team of mentors from the KAUST Entrepreneurship Center, other teams from Innovation & Economic Development and from Dow will be on hand to help students during the challenge.

The objective for STEAM is that student teams will develop & present well-defined solutions to three major real world challenges developed in partnership with Dow in just three days. The students chosen for this elite activity should have a background or expertise in Science, Technology, Engineering, Arts and Mathematics (STEAM).

It will involve Saudi university students working in mixed, interdisciplinary teams alongside students from partnering Saudi Universities. Partner university faculty will pre-select and choose outstanding students from their universities, while KAUST students can apply to WEP rules. All participants must commit to the three days of the program. The competition element of the program takes place on Saturday the 21st where teams will present their ideas in each of the three Challenge areas, with the winners from each Challenge presenting later that day in a final. There will be certificates and cash prizes for the winning teams.

The STEAM Challenge is designed and managed by the KAUST Entrepreneurship Center, part of KAUST Innovation and Economic Development.

Challenges

The STEAM Innovation Challenges put forward by Dow with support from the KAUST Entrepreneurship Center will focus student teams on creating ideas that are implementable, the create potential change in society and behaviors and that will lead to measurable impacts. The solutions that are put forward during the three days of the STEAM Innovation Challenge are hoped to help Dow as a company and a global citizen to real solutions to humanities needs in the Kingdom and beyond.

The three Challenges of the January 2017 are:

- 1. Living Spaces: How can we drive creation and adoption of sustainable buildings for people?**
- 2. A Better World: Driving Dow Innovations into People's Lives**
- 3. Energy: How do we embed new sustainable energy systems in the Kingdom and the region?**

Further details and background information on these challenges will be available at the event for specific teams.

Managing the Challenges

Students will be pre-selected by the organizers into small mixed teams, students will be made aware of which teams and which Challenge they are part of during the first morning. It is up to each group to manage itself through the process, though mentors will be on hand to offer advice and help.

Each team will be given one of the three main challenge areas to work on. Each challenge has a number of sub-themes.

The team can decide on which sub-theme to pick and that can include a solution that tackles one or more of the sub-sections (which depends on the kind of solution being chosen through the ideation process). At least one of the sub-themes needs to be the basis of the solution each team comes up with. If a team uses creativity to come up with a solution that is outside of the

Program of Events

The STEAM concept ties together elements of other successful ideation processes, including the Startup Weekend idea, Hackathons and innovation challenges in other geographies, into a unique learning process. Part of this learning are short workshops that not only help to 'break the ice' with teams, but also gives participants a structure to the three days, to ensure the maximum possible results.

Intensive mentoring in the three concept rooms, ensuring that the students can both widen solutions beyond the 'norm' but also get timely and pertinent advice to support their ideation and processing, will augment these workshops. Mentoring will be provided by Dow international mentors as well as the KAUST Entrepreneurship Center and other assigned mentors.

Location: KAUST Building 19, Third Floor

Day One: Thursday 19th January 2017

06.00 hrs	Buses leave from Habitat Hotel, Jeddah
08.00 – 08.45 hrs	Registration and Breakfast
08.45 – 10.00 hrs	Ice Breaker Event <ul style="list-style-type: none">▪ Overview of Challenges▪ Concepts of Creativity▪ Innovation Processes▪ Ideation as a system
20.00 hrs	Program Ends – Buses back to Jeddah

Day Two: Friday 20th January 2017

06.30 hrs	Buses leave from Habitat Hotel, Jeddah
08.30 – 09.00 hrs	Breakfast <ul style="list-style-type: none">▪ Framing the Idea Concept▪ Design Thinking including Journey Mapping▪ Customer Discovery Tools
18.00 hrs	Program Ends – Buses to Jeddah

Day Three: Saturday 21st January 2017

06.30 hrs	Buses leave from Habitat Hotel, Jeddah
08.30 – 09.00 hrs	Breakfast <ul style="list-style-type: none">▪ Communication of Ideas including Pitching▪ Semi-Final Pitch Event (after lunch)▪ Final Pitch Event (Late Afternoon)
18.00 hrs	Program Ends – Buses to Jeddah

About Dow

Dow (NYSE: DOW) combines the power of science and technology to passionately innovate what is essential to human progress. The Company is driving innovations that extract value from the intersection of chemical, physical and biological sciences to help address many of the world's most challenging problems such as the need for clean water, clean energy generation and conservation, and increasing agricultural productivity.

Dow's integrated, market-driven, industry-leading portfolio of specialty chemical, advanced materials, agrosiences and plastics businesses delivers a broad range of technology-based products and solutions to customers in approximately 180 countries and in high-growth sectors such as packaging, electronics, water, coatings and agriculture. In 2015, Dow had annual sales of nearly \$49 billion and employed approximately 49,500 people worldwide.

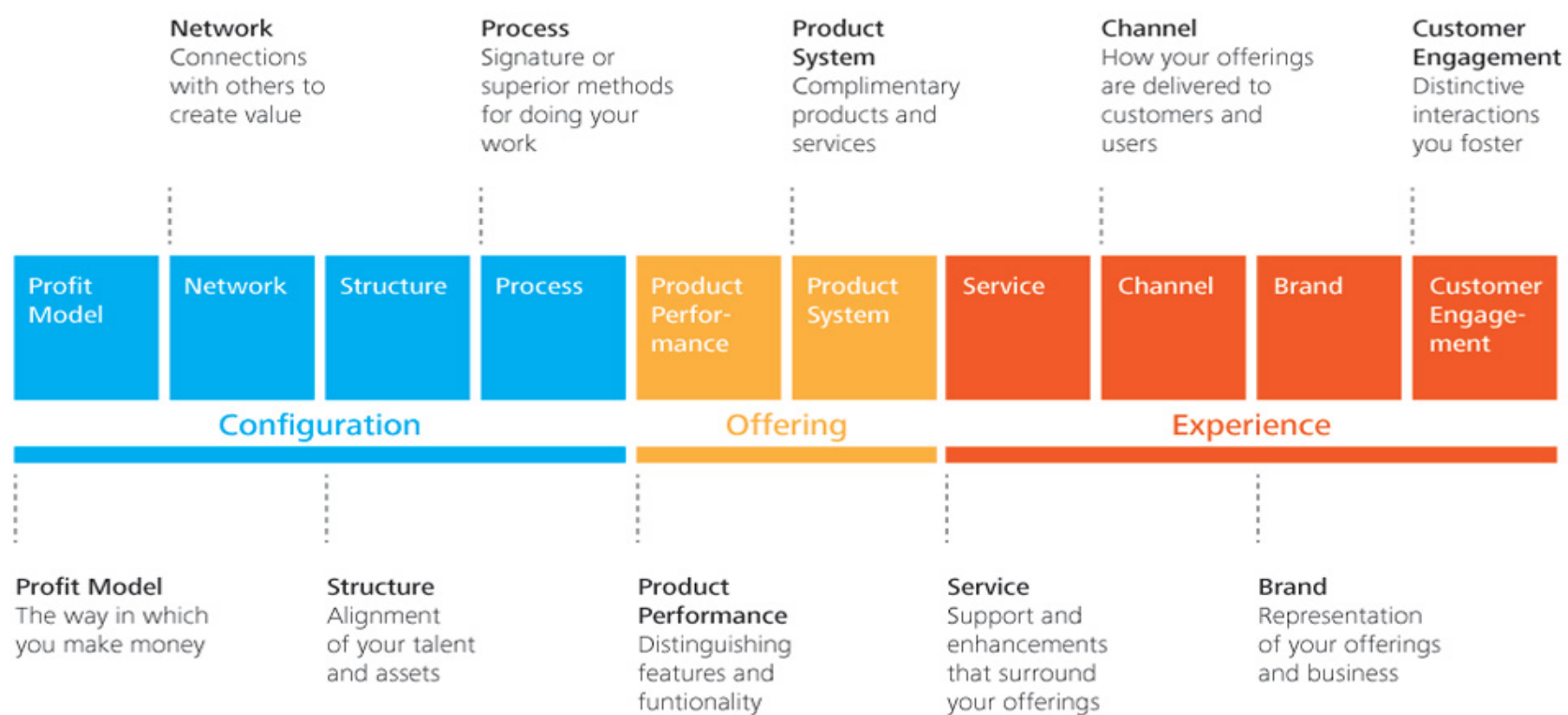
The Company's more than 6,000 product families are manufactured at 179 sites in 35 countries across the globe. On June 1, 2016, Dow became the 100 percent owner of Dow Corning Corporation's silicones business, a global company with sales of greater than \$4.5 billion in 2015, 25 manufacturing sites in 9 countries and approximately 10,000 employees worldwide.

Crafting a Solution

The objectives of the STEAM Innovation Challenge is to come up with a proposed solution:

- That offers a solution for some or all of the overall theme including at least one of the sub-themes
- Is realistic while also being innovative
- Where the value proposition of the solution can be clearly defined, articulated and communicated in the pitches that take place on Saturday afternoon
- Can specifically reference how the solution can be delivered to the market, with specific reference to the 'local' markets including the Kingdom of Saudi Arabia.

These solutions, depending on the Challenge and areas within the Challenge could be one or more of these:



Source: *The Ten Types of Innovation* [Doblin]

STEAM Process

The key elements of the STEAM Innovation Challenge:

- It is a short-timed challenge, started and completed over a three-day or 72 hour intensive time period.
- Participants are committing to the entire three days of the event.
- It is a team building exercise made up of students from seven universities in the western region of Saudi Arabia.
- Teams will be selected into small mixed groups of participants, with an attempt to mix competencies, genders and universities within the teams.
- Each team will have one of the three challenges randomly chosen for them to work on.
- Each challenge topic (there are 3 in total) will have a semi-final on the second day with one winner in each category, who will then go on to compete against each other in the final.
- Mentors will be present in each of the three challenges (separate rooms) to support teams in their ideation and presentations, these include KAUST and Dow mentors.

Teams & Challenges

1. Participant students will be assigned by the organizers to a team in one of the three rooms on the third floor of *Building 19* in KAUST. Registration will be by room name, and each room will secretly be designated with one of the three challenges.
2. The three rooms are coded as:
 - Ibtikar (Innovation)
 - Ebda'a (Creativity)
 - Riyada (Entrepreneurship)
3. Once the event starts, student teams will be told which of the challenges you have been assigned to, with each room designated one challenge.
4. Each team will have a table designated by number in each room, where you and your fellow team members will work on the assigned challenge of that room. You will be notified which room/table number your team is based at.
5. There will be no exceptions or changing of teams/rooms. If you don't know which team or room, these details will also be listed at various points at the event.
6. Please note that the teams will be mixed in terms of participating students from different universities and also mixed in terms of gender.
7. Participants will not be able to choose which **team** they are in, as the organizers will randomly select these.
8. Participants will not be able to choose which **challenge** you will be doing, this will be chosen for you.
9. Please bring a laptop with you if possible, as you and your team will need to do research on any given Challenge area during the three days.

Please Note: Dow has first rights to any new idea that comes out of the STEAM Challenge event, due to their sponsorship of the event.

Each participant will receive a Certification of Completion from KAUST at the end of the event. The winning team will also be awarded with an additional certificate.

Competition

- Every team will present on Saturday afternoon in a semi-final in each room/per challenge (approximately 10 teams per room).
- Pitches will be 5 minutes long plus 5-8 minutes for key questions from the panel of judges.

We understand you may have knowledge or interest in one or other areas, but part of the idea of STEAM is that we have people with mixed backgrounds looking at the challenges with 'new eyes' rather than just their own backgrounds or experience.

It is also vital that if you have signed up to attend STEAM but change your mind or are unable to attend, you must let us know in advance as that will affect the make-up of your team.

Judging Criteria

The organizers, partners and/or their representatives, plus selected experts invited by the sponsors will serve as judges for the competition. The decision of the judging panel is final. Judges reserve the right to alter prize amounts. Judges will be made up of KAUST and Dow management.

The various judges will assess the quality of the solutions to the challenges and the final pitches in terms of its uniqueness, innovation level, potential viability, size of impact, ability to scale and the level to which it offers a sustainable solution to the challenge that the team was given. The quality of the pitches and ability to communicate the idea will also be judged. A full set of judging criteria will be made available at the event.

Key Reminders for Visiting Participants:

Please take special note of these points, as they are critical to the running of this very large innovation challenge process:

- Please note this event follows normal KAUST procedures, and will take place in English.

- If you are a visitor to KAUST, please ensure you come to main security at the main KAUST entrance only.
- Please ensure that your visitor details are sent to KAUST up to five days in advance of the visit.

If you have any issues with security/access to KAUST during the three days of the event please contact:

Mr. Abdulrahman Aljiffry Mobile: 054 4701693

A member of the team, Mr. Jerry Faldas, will be based at the KAUST visitor center from 7 am until 10 am on Friday morning.

Logistics, Registration and Security Passes

1. **Two buses will run from the Habitat Hotel in Jeddah on Thursday (6.00 am), Friday (6.30 am) and Saturday morning (6.30 am) and back again on Thursday, Friday and Saturday night, please check the schedule.**
2. There is an early and late bus back on Thursday and Friday night, in case some team members want to keep working on their ideas.
3. It is critical that you ensure you have given the right information needed for passing security at KAUST.

Important: All Visitor(s) to KAUST must go through security at the main entrance and have to have the following on arrival at the Visitor Center:

- Original and valid governmental ID (National ID, Iqama, or Passport). The same ID that you used to register.
- Valid driving license.
- Valid vehicle registration. (If driving)

Important: A visit might be rejected if visitor(s) fail to meet the above requirements.

4. It is critical that you arrive at security between 7-8 am or earlier on the first morning, to ensure that you can get through security in time for the event to take place according to the schedule below.
5. Please note it is not possible for non-KAUST students to stay on campus during the event, therefore the buses or personal cars must be used to and from KAUST on both days.
6. Please ensure that you bring a laptop with you.

Please note that if information for processing entry to KAUST has not been completed correctly or in time, there may be a possibility that entry into KAUST is not possible. This includes none registered cars or taxis.

MAP to Building 19, KAUST

