# Get To Know

By Mohammed Al-Thani
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Advisor: Megan Fath

SVA NYC DSI
Design for Social Innovation

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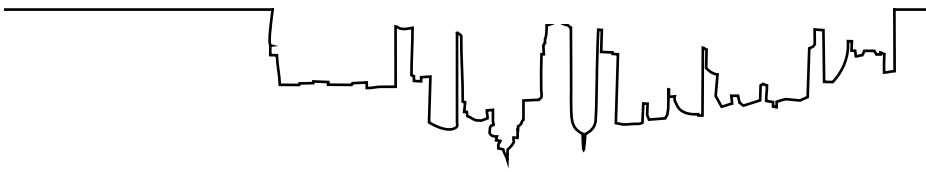


# Introduction

**Background**

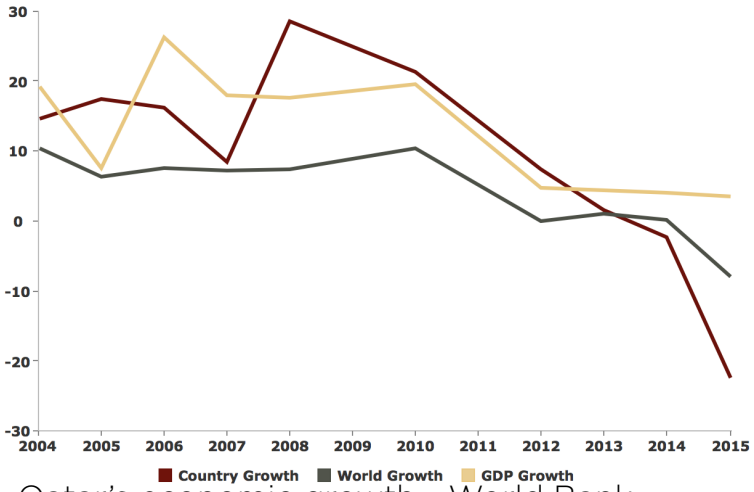
Qatar witnessed rapid growth which required knowledge and expertise from abroad to help in achieving its goals. Since 2001, Qatar became a place of opportunity with many projects focusing on Economy, Sports, and Tourism taking the lead.  The wheels are turning because of an unsustainable resource that has become the major source of income, a source that is now a legacy fuel: Oil. Qatar's economy is shaped around Oil and Natural Gas being its major exports. This lead to the commercial sector the most active recruiter. In answering the world's demand for energy, Qatar limited its source of income, creating a challenge once that unsustainable source of income depletes.

# Introduction

**23% of global electricity production!***

**What happens when an industry collapses?**
Throughout history, we witnessed events that are bound to repeat themselves. For example, the Auto industry in Detroit here in the United States, and how the collapse of an industry lead to problems such as unemployment, poverty, and many social issues that cripple a country. The questions then becomes what would happen to Qatar in a world that is not Dependant on Fossil fuels (Legacy fuels).

**The effects are happening now, and Qatar's growth has been declining.**



Qatar's economic growth - World Bank

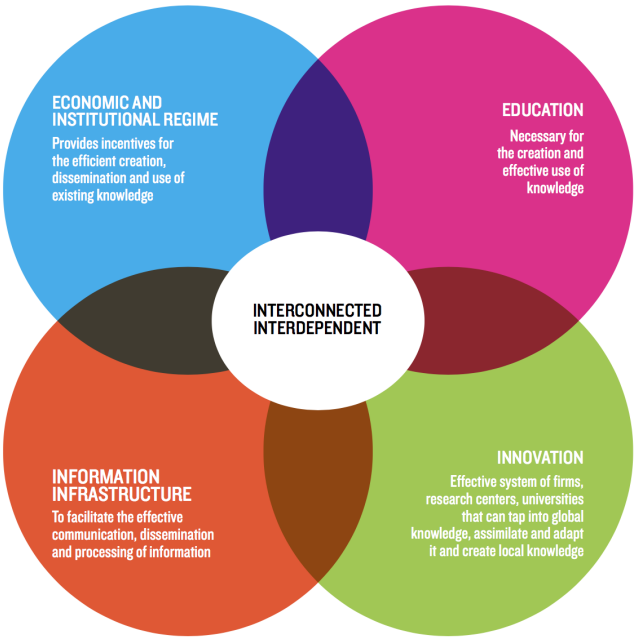
**83%**

**And with an export that is not very diverse**, Qatar needs to adapt to a world that no longer needs its current resources.**

*WEC 2016 Report
**World Bank

# Introduction

But Qatar has been proactive, with many organizations and institutions that are moving towards a goal of becoming a **Knowledge Based Economy (KBE).** By focusing on developing our human capital, we can diversify our workforce and create an economy based on our knowledge and expertise, lowering our dependence on legacy fuels. Under it's 4 pillars as seen in the diagram below.

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The plan aims to connect 4 main factors that help build and sustain a KBE. A major effort was introduced to create the platform for Education and Innovation, as the main activity of **Qatar Foundation (QF)**, and organization spearheading and making the goal come to life. This also lead to the foundation creating many programs and initiatives in Education and Innovation, as it aligned with their activity and what they want to provide for the community: deliver knowledge.

# Introduction

Including QF, there were many initiatives that also focused on human development in:

### Education

Students can now specialize at a high-school level in 3 fields: Business, medicine and engineering. Even at an early age, people are hard at work to help students way before high-school. **Teach for Qatar** is one of this organization, helping young students with their English, Science and Math proficiency. Although they cater to a different audience, but their fellows interested me during this phase as people that pivoted in specialization after graduating from university. They are people who decided to take 2 years away from their professional lives to teach kids those 3 subjects. *"Fellows are doers, they want to give back to the community. A few of them are no pursuing a career in education."* Fatma Al-Khater, Teach for Qatar.

### University Preparation

Qatar Foundation has been at the center of this stage. "We tried scaling a guidance service but if failed." Habis Al Hoawil, QF. They understand there is a gap between the students and their initiatives.

### Career Development

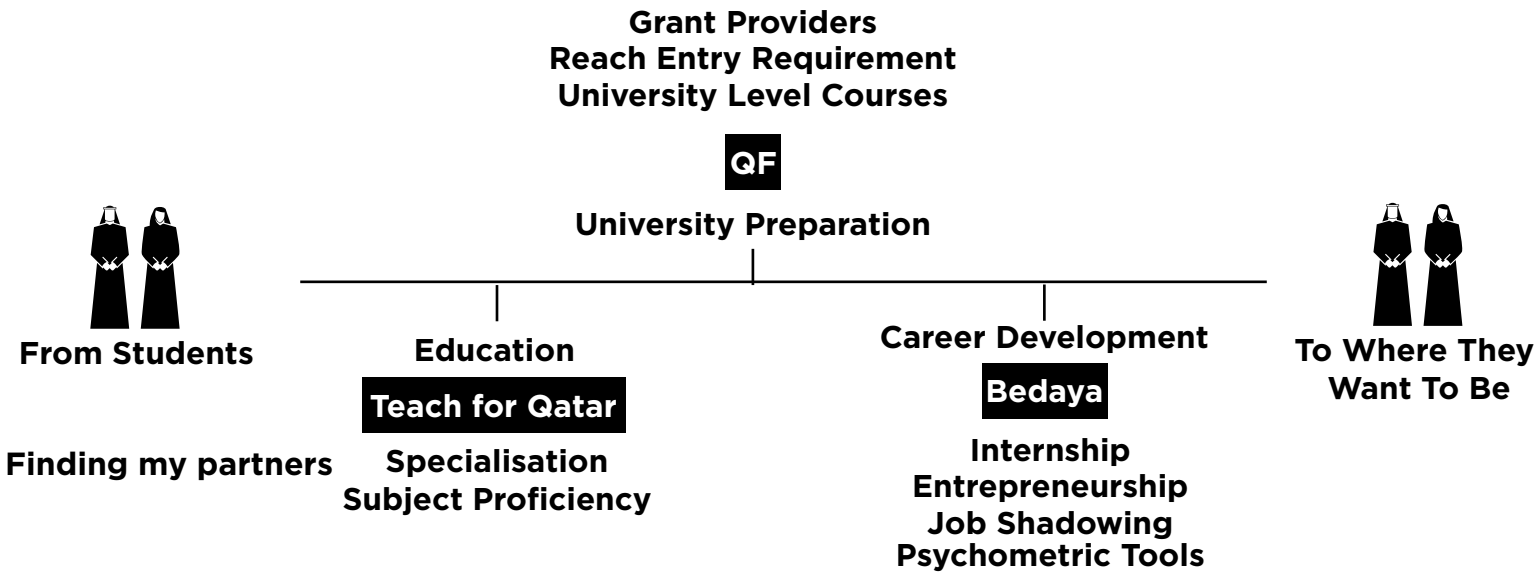
Programs that offer job experience, job shadowing, entrepreneurship, career finding through tests and coaching amongst many programs that were introduced. **Bedaya** is one of this institutions that offer such services and I reach out to see how active they were with my audience. *"We had a training took all 42 guidance counselors from public schools in Qatar that helps link our programs and activities with their students."* said Oula Abdin, from Bedaya. A large effort was put into communicating the tools students have at their disposal and how guidance counselors can help students plan once the information is handed over to them. She also expressed how these programs use to be free, but due budget cuts from less government funding, a new barrier of paying for these services exists.

# Introduction

**Potential Audience**

All of which center around enabling the next generations of our workforce to reach their maximum potential and explore the opportunities available. My aim is to assist Qatar in reaching its goal to become a Knowledge Based Economy by helping our next generation, **current high-school students in Qatar**, explore the opportunities in fields that lack local knowledge such as Medicine, Education, Research, and so on.

By mapping out where these programs and initiatives interact with students, I can observe the interaction students have with organizations such as QF, TFQ or Bedaya. All of which are potential intervention points but serve one purpose. Creating such system r



# Introduction

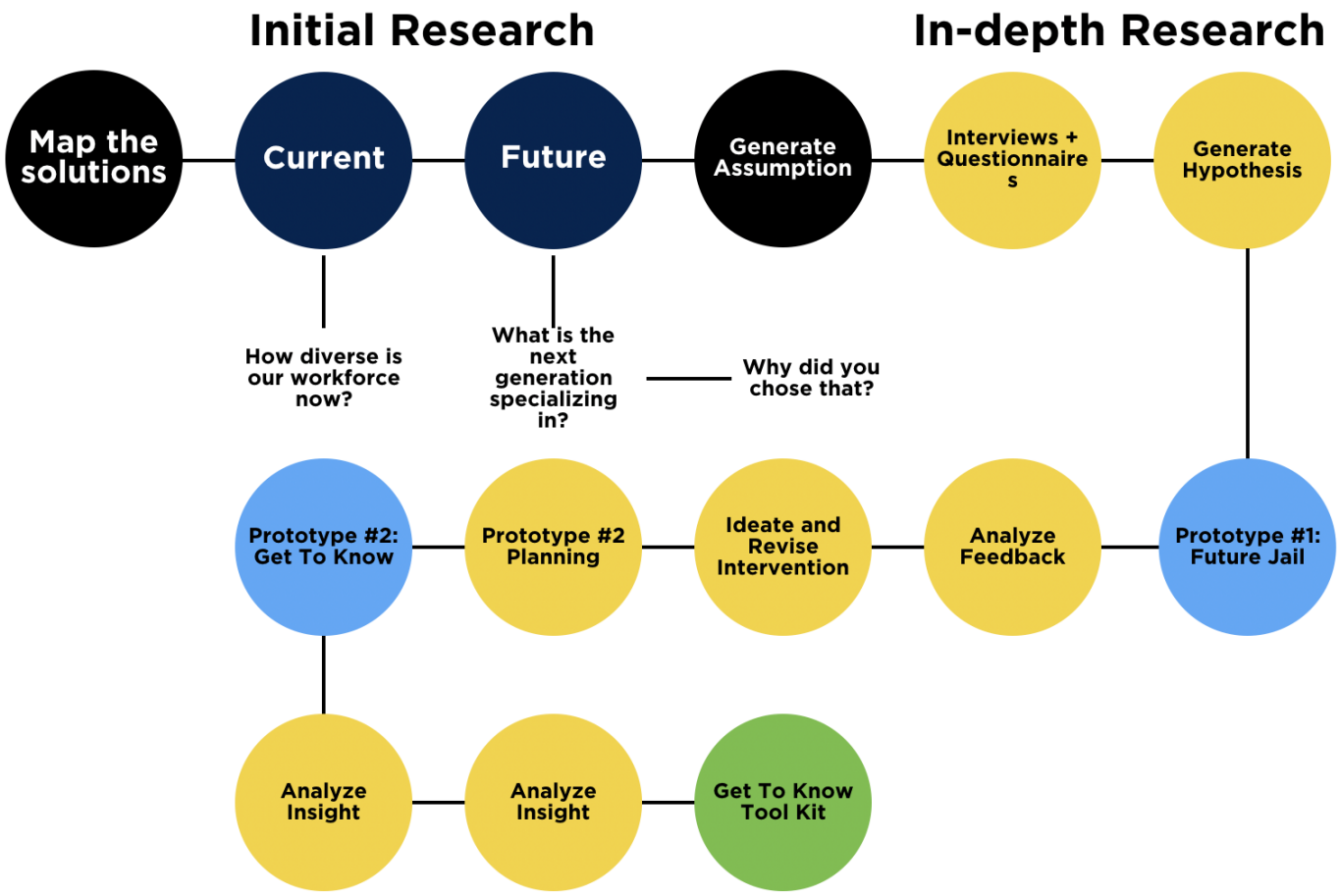
**Finding my partners**


I am working with the Qatar Foundation, Qatar's leading NGO that created many of the education initiatives and setting the goal of becoming a Knowledge Based Economy. The foundation is responsible for creating a platform for major universities from around the world to offer their degrees in Qatar, and guiding students towards achieving academic requirements to enter such universities in Qatar or around the world.


I am also working with QEERI, the Qatar Environment and Energy Research Institute, Qatar's only Environment and Energy researcher. They are an initiative under Hamad Bin Khalifa University, an education initiate from Qatar foundation. With the change in the world's energy sector, Qatar is focusing on expanding the knowledge of renewable energy and tackling energy issues that can be shared with the world.

# Process

## Process overview



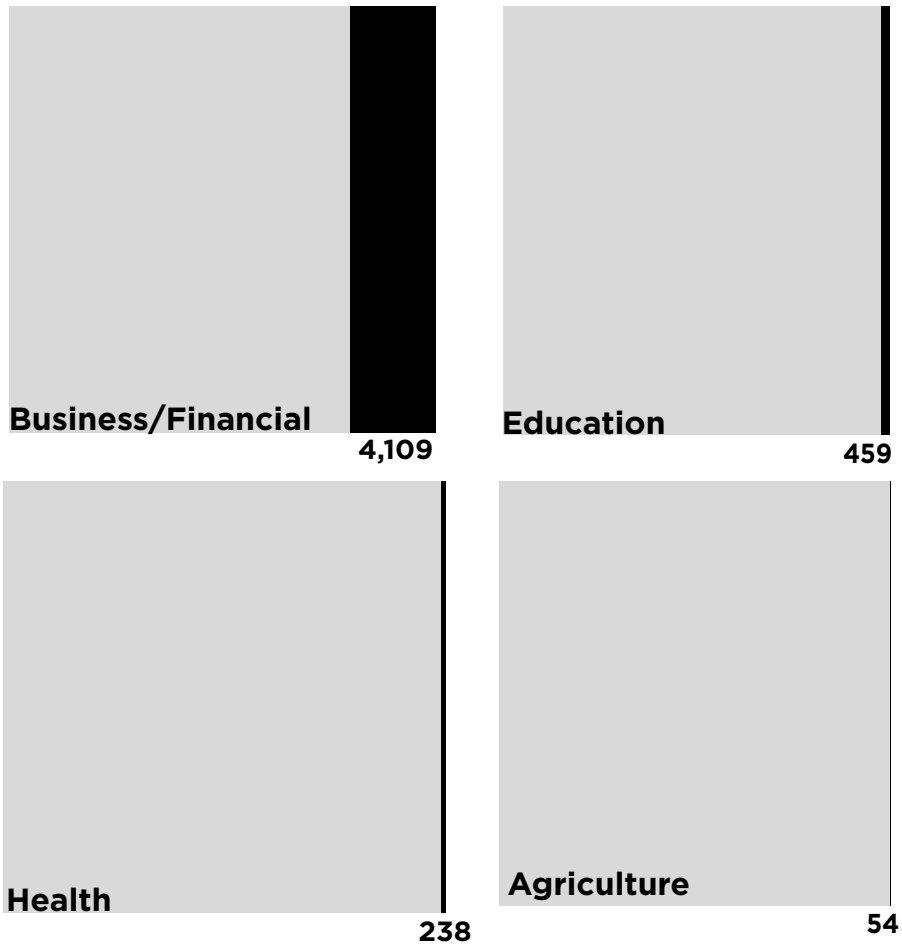
# Process

### Mapping Solutions

Before I started in-depth research, I wanted to understand the current system that was created to guide us into becoming a Knowledge Based Economy around my target audience as seen on **Page 7**.

### Initial Approach

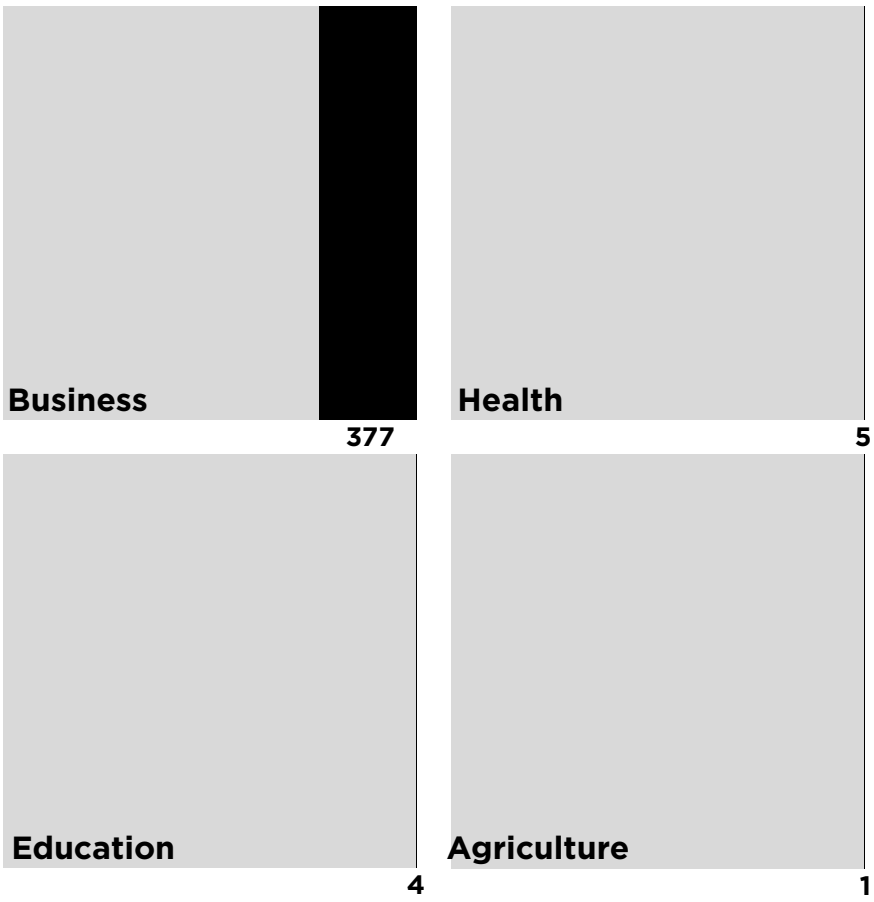
First, I wanted to see the effectiveness of these programs. Since they have been active for a while, what sources would they effect? The end result is diversity in specializations. Looking at the current workforce diversity and comparing it with what the next generation entering the workforce would allow me to get an overview of how effective it is. Using information from the Ministry of Development and Planning Statistics, I was able to map the diversity of our workforce from a **sample of 21,000 employees** and the sector they work in:




**Almost 23% of the workforce is employed in Financial activities, with extremely low numbers in sectors that are in need of local knowledge.**

# Process

But what about current students? People that have been around when the KBE plans were initiated could have decided to pursue careers in other sectors based on their interaction with the programs and initiatives in education and career development. I mapped our what **1591 students** on grants from Qatar are studying:

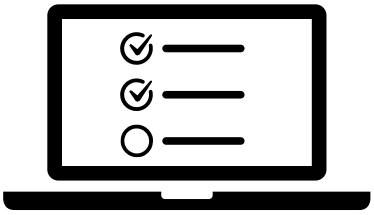



Their choice in specialisation is mirroring the current workforce with focus on Business rather than other sectors. This lead to my first assumption: students lack awareness of programs and activities that help them explore opportunities in other sectors.

# Process

## Finding my audience

I needed to understand what students based their decision on. I chose to work with **high-school students in Qatar** who are about to make a decision about what to study and the type of career they want. By understanding those factors, I can increase the chances of them considering certain fields and sectors as a career opportunity. Also, they are the focal point of many of the programs and initiatives that were created to become a KBE, and insight gained from my research could also assist them. I'm working with brilliant minds that **chose to specialize in Engineering** and want to explore if there is a life beyond Petroleum or Gas Engineering in Qatar.



**Survey - 40 Responses**

**Target**: students already studying at university level
**Aim:** frame the factors students consider when making a decision to study and their source of influence.
**Method:** created an Online survey and distributed through WhatsApp groups of students studying abroad.

Result: Students mentioned their Parents and Peers as a source of influence regarding making their decision. To be clear, this does not mean parents and peers made the decision for them, but they received information from their parents and peers that helped them pursue their current education.

# Process

**Interviews (8) and Questionnaires (13)**

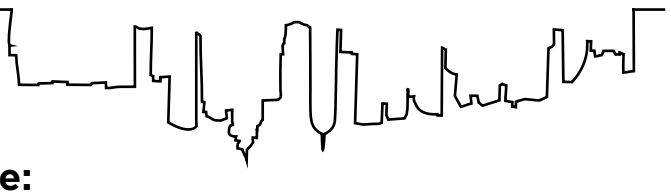
**Target:** current high-school students in Qatar
**Aim:** Build a profile for my audience. Gauge awareness about current resources. Level of planning and towards their career in the future.
**Method:** Skype (Questionnaire used when the students can't be interviewed in person.)

Result: To start, I had the following assumptions based on my findings from the survey:

-Counselors at school are not providing help or guidance to students
-Information about university requirements are not communicated early enough
-Students are not thinking about their careers
-Students are influenced by what their parents do for a living and tend to go down the same path

The interviews yielded valuable information that proved my assumptions wrong is most cases but also bolstered some and allowed me to use them as insights. The questionnaire was used to reach female high-school students which I couldn't interview in person due to cultural barriers. By gaining the help of a family friend that teaches in an all girl high-school which had 13 respondents.

# Process



**My biggest insights from the interviews were:**

1. Students are less aware of career development event and resources outside of school during the interviews, **Qatar's University** Fair was in full swing where universities from around the world are there to showcase what they have to offer. These universities are also part of the Ministry of Education's grant list, meaning students can get a full ride if they are accepted. To my surprise, none of my interviewees was aware of the event. Students are limited to what happens within school walls or if the event created any awareness in the school prior to it happening.

2. Parents are more informative about fields they are aware of, or know someone that could provide them with information. It was easier for parents to answer student questions when they were knowledgeable of the field they are asking about. In some cases, parents reach out to their peers which also limits the information students gets.

3. Students can't decide if they can't see how their jobs evolve in the future. A repeating theme was understanding what the career will be like in the future. Students were questioning relevance of certain fields such as Petroleum Engineering.

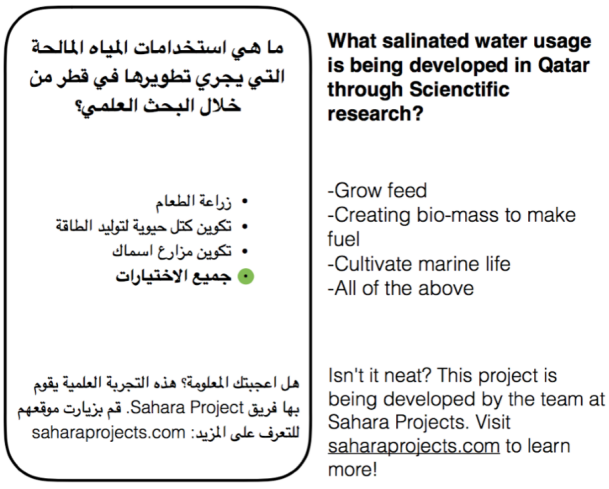
4. Students are more exposed to commercial organizations during events that focus on business, communication, and engineering. Students are exposed to organizations who are more active in out-reach. These organizations are semi-governmental and commercial organizations or companies that work in the industry of Gas, Oil, Telecommunication, Infrastructure, with no presence for Education, Research, Medicine, Agriculture.

# Process

**Prototype #1: Future Jail**

**Aim**: deliver information in an engaging manner that promotes dialogue and self-guided exploration.

**Idea:** Based on a traditional version of Ludo or Sorry! “Sijin” is boardgames that witnessed some resurgence lately. It is a competitive game, and I decided to add an extra layer to the game by introducing **Trivia as a new mechanic**: In order for players to progress further through the game, they have to answer **Trivia questions**.

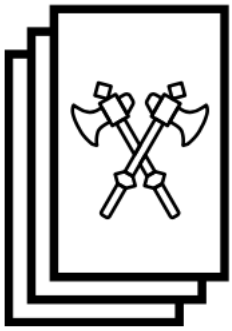



## What’s in the cards?

The cards are filled with questions with the topic of Science and Research. Topics like Biomedicine, Computer Science, and Energy are discussed. The cards share information about the organizations working in those fields, the challenges they are overcoming through research, ongoing projects and how to reach out to those organizations.

# Process

**How do you use the cards?**
-Deflect an opposing player's attack
-Unlock a third dice to speed up the game.
-When you land on a golden square, answer to gain safety!



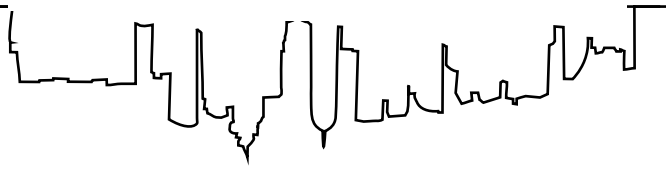
**Learnings from Prototype #1**

-Out of 16 unique players, only 2 students were knowledgeable about the Science and Research sector in Qatar. The low awareness of the sector's players and ongoing projects were resulted in the players being informed and peaked their interest in Energy and Biomedicine specifically.

-Students found the game too long, and the low amount of cards prepared shows that replay value is limited. The content needs to be richer if it is only limited to the game.

-Students used their phones to check on information Online during discussions about trivia cards. Beyond that, there was no visible effort into exploring the field after the game ends.

# Process



### Refine the idea

Using the insight from my first prototype, I went back to the drawing board and refined my idea. The students were limited to information in the deck of cards, and no reason to play the game again. The game couldn't function as a solution on its own, but it delivered information in a unique way that engaged my audience. Instead of scrapping the game, I decided to re-purpose it as part of my idea and not "the" idea. This lead to refining my hypothesis to fit what I need to deliver to my audience.

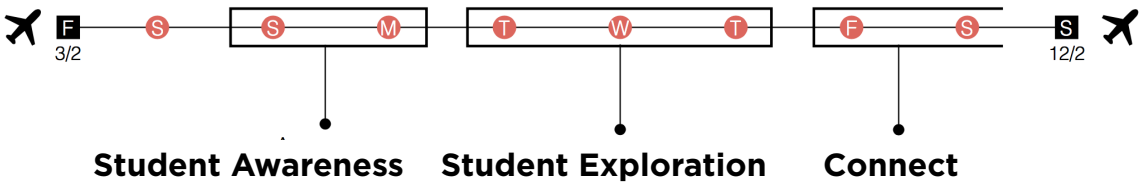
Going back to my previous insights, I re-examined what my intervention should be. It needs to share information relevant to the student's need regarding planning their education. It also needs to allow students to visit and interact with the environment of the organization, an experience that would greatly affect their decision. With these in mind, I wrote a hypothesis to guide me towards the next iteration of my intervention.

## Hypothesis

"By delivering an experience that shares the challenges Qatar is facing and who is working to overcome them, students will be exposed to the Science and Research sector as a viable option."

# Intervention

**Prototype time-line**




**Prototype 2: Get To Know**

The final version of the intervention is an out-reach activity (**Get To Know**) that QF and QEERI can implement to bridge the gap between our research institutes and students to showcase what they can offer. The activity happens in 3 simple steps.

**1. Student Awareness:** increase awareness about the energy challenges Qatar is facing, who is working to solve them and the importance of the field in the future. This is packaged as a trivia game that is played during class. The game promotes dialogue to help find answers. The outcome of the game is choosing to delve further an learn more, and students have the ability to continue.

- The game is based of a Traditional version of Sorry! Players have the ability to defend themselves and progress through the game faster by answering trivia questions about a specific topic. In this case, the Energy Sector in Qatar.
- After completing the game, students are asked if they would like to know more about the sector and if they would like to visit and meeting researchers at QEERI.

# Intervention

**2. Student Exploration:** Participants get to visit QEERI and are greeted by an expert. A scientist will sit with the students and start a discussion. During this time, students learn about how they can prepare to participate in the energy field, learn about the parents working with QEERI, and gain information from the source.

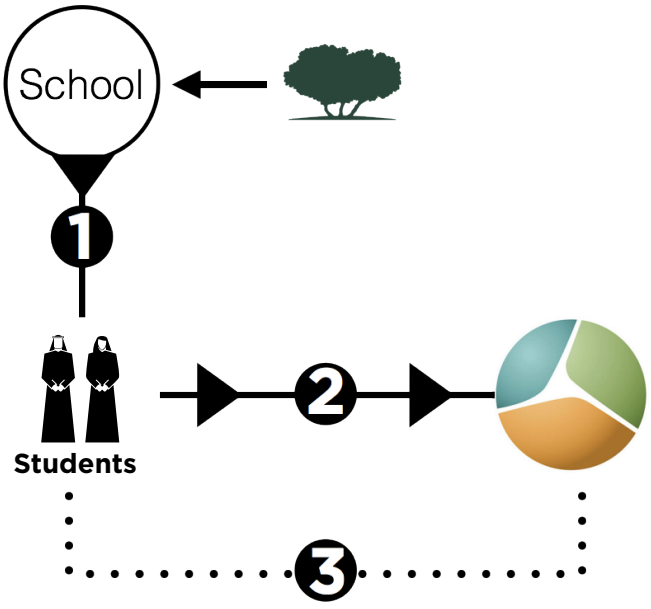
- The trip will be facilitated by QF and QEERI. QEERI will assign an expert to talk and tour the facility with the students and will act as their link if they reach out for assistance after the activity is concluded.

**3. Connect:** Allow participants to remain in contact with the experts and leave with the information needed to start planning towards a career in Energy, and equip the students with a guide to help them start planning towards the field of Energy.

- Students will need assistance as they start planning. Other than their immediate sources like school counselors,

**Overview of Interaction**

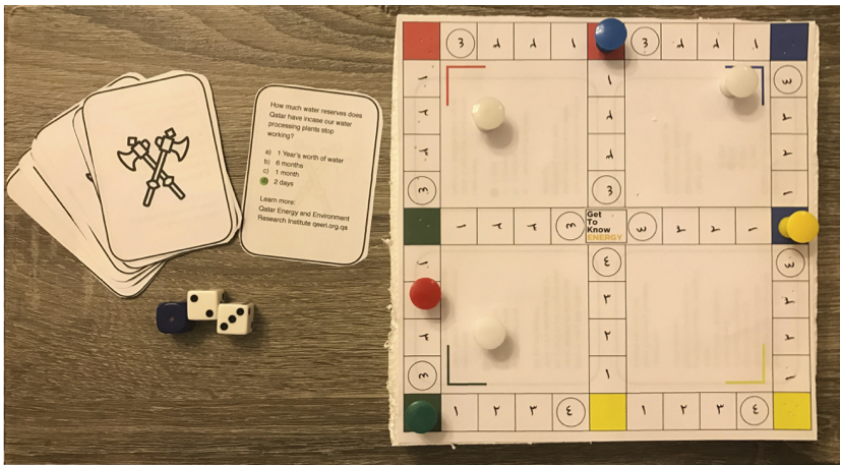
At the beginning, school finding and facilitation will be supported by QF and deliver the Get To Know package to participating schools and teachers. After that, the activity is initiated and students sign up to visit QEERI. The final step is keeping the connecting between Students and the experts live.



# Intervention

**Step 1: Student Awareness**

Increase awareness about the energy challenges Qatar is facing, who is working to solve them and the importance of the field in the future. This is packaged as a trivia game that is played during the first 15 minutes of science class. The game promotes dialogue to help find answers. The outcome of the game is choosing to delve further an learn more, and students have the ability to continue. This leads go our second step, Exploration.

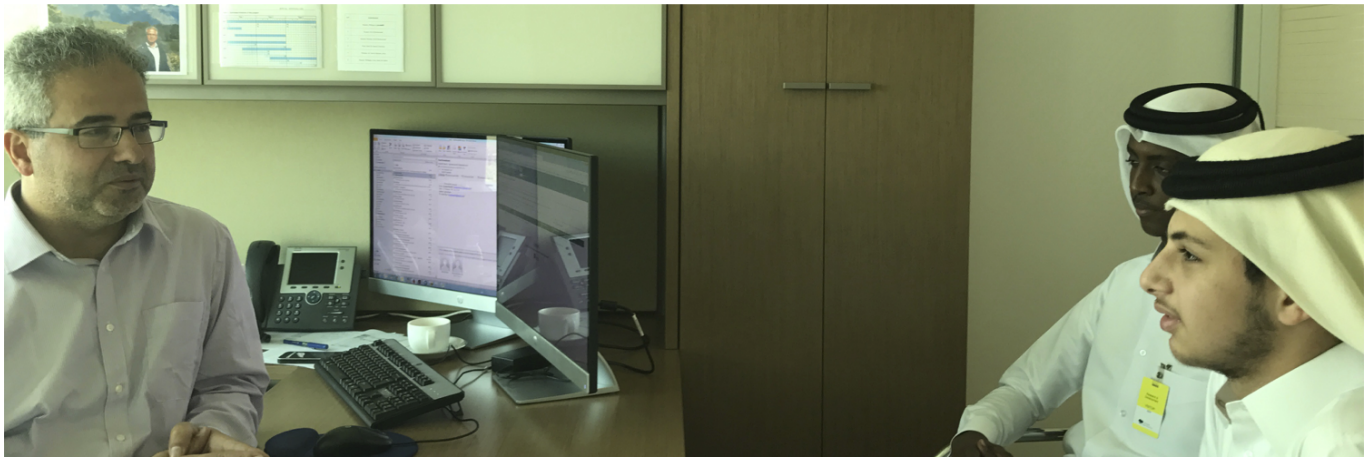



The game from Prototype #1 was redesigned to have a smaller board. This made the game move faster, averaging 15 minutes per session.

# Intervention

**Step 2: Student Exploration**

Participants get to visit QEERI and are greeted by an expert. A scientist will sit with the students and start a discussion. During this time, students learn about how they can prepare to participate in the renewable energy field, learn about the parents working with QEERI, and gain information from the source.



# Intervention

**Step 3: Connect**

Allow participants to remain in contact with the experts and leave with the information needed to start planning towards a career in Energy. Based on the information they gained, they can fill out a guide that helps them in vital stages in their development that can lead them to a place like QEERI:

**What challenge did you resonate with the most?**
**What subjects are you going to focus on now?**
**When do you plan to begin your 1 week work experience and who will it be with?**
**Which university and major are you planning to pursue**

The planner is also a way to stay in touch with the expert you visited, giving direct access to information from experience.

# Intervention

**Results:**

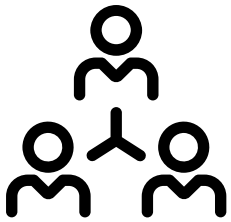
Awareness
Similar to the results from Future Jail, the first prototype, none of the students were aware of the information in the trivia game. But with the addition of new content, students found even more information that shocked them.

For example, the vital role of a researcher in matters that affect national security. With our limited resources, can we afford a world with no fresh water with the current climate issues? Such facts were a symbolic hook.

Exploration
Students are also more aware of how to prepare our enter the field. Because of the discussion, my participants now know that Geology, Physics, Geography and Math are essential for a researcher at QEERI. They were able to understand how each subject helps a researcher by showing them the tools they use and how these subjects come into play. One participant said "**I enjoy the paperwork more than lab work. I was surprised that he used mapping software to do research."**

In terms of experiencing the work place, students came in with assumptions of what a research institute would look like and what the people there would also be like: "I enjoy the paperwork more than lab work. I was surprised that he used mapping software to do research." They also got to interact with researchers in their labs and were surprised that they were not wearing white coats!

# Intervention



Connect
Students used the information they have to start planning towards being part of QEERIs network of partners. It is not the final destination and students can specialize in many fields that in the end help their community. Dr. Housam explained how he is a Civil Engineer that is now a Hydro-geologist at QEERI, and students have the option of specializing in Energy or not. Through an example of his current partners, students understood that it is not too late to pivot.

**User feedback:**

“I thought we were going to a conference or something like what happens at school. Someone would come and talks for an hour or so and that is it. You can’t usually ask questions”

Students found the 1-on-1 discussions fruitful. They were able to ask very specific questions that revolved around: universities to enroll in, subjects that are used as a researcher at QEERI, the place of a petroleum engineer or any kind of engineer in the research sector.

“They don’t ask you, they just bring them randomly.” They were also more engaged since the decision to visit QEERI was not mandatory.  Even during the event, participants used apps such as Snap Chat to document the trip, intriguing their friends about their experience with Get To Know.

# Next Steps

**Moving beyond Science and Research:**

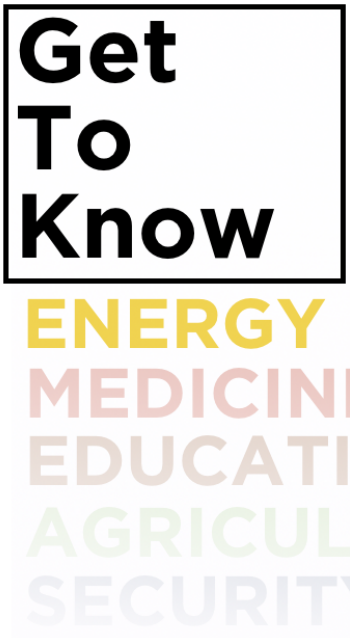
The first step is to adapt the content to assist other sectors. By changing the trivia content in Step 1: Awareness, the student's journey can be viewed through the lens of multiple sectors such as Education, Medicine, Agriculture, and Security. The end users are the students, but the beneficiaries are the organizations that utilize Get To Know.

**Decentralize the process:**

Qatar Foundation acts as an incubator for its initiatives. Once organizations such as QEERI are independent, they need to adopt the outreach activity and apply it without assistance from QF.

**Increase Number of Participants:**

One of the barriers to getting students to the second step was their assumption of it being an experience similar to what happens at schools. Fearing a 1 hour lecture, some students didn't go through with the visit but later requested to visit after learning about it from the students that did participate. Utilizing the students as a reason to believe and go through with the experience is important to increase the number of participants.

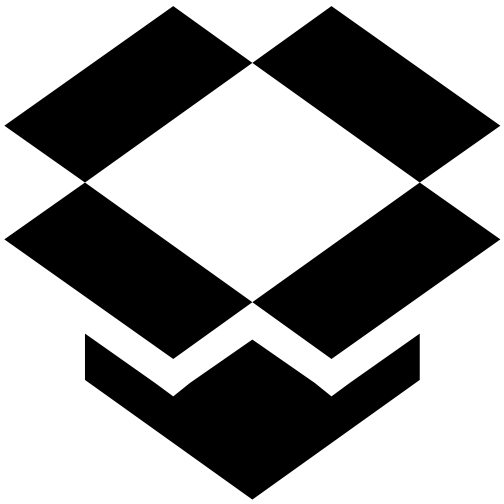


# Next Steps

The Qatar Foundation will receive a toolkit to embed **Get To Know** as an out-reach activity in their organization. The tools kit will include the trivia game, Sijin, a process guide to initiating and deploying the activity, surveys to measure the experience and to develop upon it.

**“Get To Know” Project Plan**

Guide to reach schools with the correct audience
Recommended dates based on education calendar

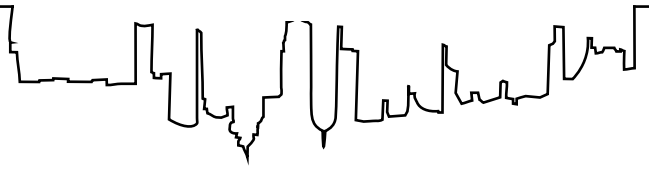


**“Get To Know” Process**

Touch-points across QF structure
Show interaction between departments (Out-reach, facilities, other institutions)

**“Sijin” Game**

Board design
Card content
Rule Book
Sign Up Sheets
Instructions to build the game



# Thank You...

To my family back home for their patience.
To everyone that made me feel at home in NYC.
To the faculty of DSI and SVA for being guides and mentors.

Mohammed Al-Thani
MFA Design for Social Innovation
The School of Visual Arts
2017