

::OUTLINE::

In my presentation, I will be attempting to answer the question: What is the Maker Movement? It features three takes, namely:

- 1. The Maker Movement is about turning ideas into reality. (By Joel)**
- 2. The Maker Movement is about doing something you love. (By Veera?)**
- 3. The Maker Movement is about empowering people. (By E-nable.org?)**

My vision is to convince the audience that there is no definite answer. The Maker Movement instead is a combination of the paths, and goals of different individuals, in making things possible. In doing so, I hope the audience will embark on their own individual paths of discovery.



Good afternoon everyone! My name is Joel and I am pleased to share my topic with you today, which attempts to define: What exactly is the Maker Movement?

#1

Before I begin, could I have a show of hands – How many of you have heard about the Maker Movement? (raises hands up). Well, the Maker Movement, and the art of “Making”, is a term coined by Make in 2005. According to Wikipedia, the Maker Movement is “a contemporary culture or subculture representing a technology-based extension of DIY culture...”, encompassing “activities such as metalworking, woodworking, and traditional arts and crafts... encouraging invention and prototyping”, with “a strong focus on using and learning practical skills and applying them creatively.”

Such definitions are useful (and this brings me to my question) but – may I ask – what exactly - is the Maker Movement? What exactly defines this culture of Making?

#2

Is it defined by collaborating with individuals, bringing the community together to solve problems?

#3

Or is it perhaps about education – Teaching the young about electronics, design and green farming through kits such as the Arduino?

#4

Or perhaps it is simply just an exclusive community of – tech geeks?

#5

Or just maybe, a movement celebrating the spirit of innovation?

And so – What exactly is the Maker Movement all about?

May I suggest three responses to the audience that tackles this question.

Perhaps I should begin by sharing my experience with you, on my personal Maker journey.

And so first up: The Maker Movement, to me, is about turning ideas into reality.

My personal journey of Making probably started when I was pretty young. Back then, I was (and still am) a fan of Lego. Later, my mom introduced me to web development as we happened to read a book on web design.

I found these two hobbies really interesting. They were interesting because, while on the one hand Lego was the construction of physical objects, and on the other, programming was the creation of virtual ideas, both realms allowed me to express ideas into reality. They were a playground for ideas to come into being.

One of these ideas was to combine art with music. And so, I created this plugin that allows you to deploy a drag-and-drop music visualizer, on the web. And so here it is!

(Shows DingX)

My Maker journey has been shaped by others as well, and triggered by imaginative ideas that we previously thought were not possible. Back in 2012, I was volunteering with this organization called the Singapore Academy for Young Engineers and Scientists (SAYES), from Science Centre Singapore. Science Center Singapore, and the club itself, were one of the pioneers in bringing the Maker Movement to Singapore.

We had this crazy idea of creating an electrical blimp – you know, lifting electronics with helium balloons – you know, something we thought was totally unfeasible. However, we decided to try it out and guess what! The idea worked – with 7 of these

32-inch mylar balloons! (passes balloon around crowd)

This blimp is unique because, it has some artificial intelligence embedded in it. We wanted the blimp to interact with crowd and so, one could simply Tweet to it, and based on its Machine-Learning model, the blimp would move according to where it sees fit. Here is the blimp and a group photo during the First Mini Maker Faire in Singapore.

But the Maker Movement is more than just about my journey. It is also about the journey of others. Which leads me to my second definition - The Maker Movement is about doing something you love, something that interests you.

Let me introduce you to Veera and the folks from Sustainable Living Lab. (This is Veera and their booth at the first Mini Maker Faire.) Sustainable Living Lab is a social enterprise that helps individuals with Green initiatives, projects and the ability to just simply engage in something that benefits the community, the environment and perhaps something that they find worthwhile doing.

Besides engaging in Making, these projects also bring the community together. In Singapore, we have this traditional sense of longing for village camaraderie known as the “Kampung Spirit”, during the 1960s. Sustainable Living Lab nurtures this “Kampung Spirit” by bringing the young and old, people from all walks of life to just simply bond over Making.

And there’s more to it. Does anyone in the crowd know what this is? It is a hand-cycle, - an outreach project to make therapy devices for the Bishan Home for the Intellectually Disabled. These devices are different. They are designed to make such devices more interesting for the elderly to use. Isn’t that wonderful?

Yet another definition of making is more than just impacting the local community and about self. It is about what you can do, as a community, as an individual, to make a difference to the lives of people beyond you.

This leads me to the third definition – The Maker Movement is about empowering people.

Now, here’s a picture of the work that e-ENABLE does to empower people. Can you guess what this is? Yes, those are hand prosthetics! They are not just any particular prosthetics though – they are 3D-printed prosthetics. Yes, 3D-printed prosthetics!

Their work is significant, because having these parts 3D-printed, outsourced and assembled by volunteers worldwide enables the cost of prostheses to be dramatically reduced. Their work was started by this person named John Schull, a research Scientist hailing from the Rochester Institute of Technology.

Schull started this project to help a carpenter in South Africa regain the use of his fingers, but the project has since spread as an open-source initiative to help those born without fingers or limbs as a result of Amniotic band syndrome – to give a helping hand.

Many stories have been told, but may I highlight the story of one such individual, who benefited from this project. This is Tully. Tully was born with a little paw just under his elbow to do tasks. However, together with his mom and a volunteer under e-NABLE, they developed a prosthetic arm that he could use. This is Tully opening the fridge with his new prosthetic arm. Countless other stories have been told – about how a family was brought together through the assembly of a prosthetic arm, to that of an eight-year-old volunteer assembling an arm for a person 2,000 miles away from home!

Just last month, I had the privilege of meeting the pioneers of e-NABLE Singapore at a Maker's showcase called Makers' block. This is Yuanjun, together with Benjamin and Jeremy. Yuanjun first brought the project to Singapore a month back, and I understand that they first met and got together when they saw Yuanjun working at the corridor. And that was how they got started – just a month back! And so that's how they started.

Now I have brought you through three aspects of the Maker Movement in Singapore, and I am really keen on seeing what is going to happen next. We had our first Maker Faire in 2012, and many initiatives have taken root since then. Our first Maker exhibition, Makers' Block, was held just last month at a mall. Just recently, we concluded our Maker Faire at a Community Centre. And as of late, the Maker Movement has been centralized at the National Design Centre – that's right, a public building, in August. I am excited about what is going to happen next!

So back to my question. What exactly is the Maker Movement? And the short answer is - there is no definite answer. The Maker Movement is a collection of journeys, with each journey being unique and different.

The question we should be asking ourselves instead is – What is your Maker journey? What drives you? Each of us is blessed with God-given talents and abilities to impact the community. What are you doing about it? What exactly defines your Maker journey? Let your Maker journey, begin, today!

Thank you!