Overview of presentation (Notes from presentations and research)

What is an established company?

Being an established company means it usually have experience from the past and can have a lot of references to help making good decision for next move. During the growing up the company also have the strong connections/gain great loyalty from its partners/customers. This is great news because there is no better marketing than your customers. An established company could build a portfolio of testimonials, case studies and stories for interview or invited conservation, the things that a start-up could ever dream of. Established company spend as much time talking to its current customers as new ones. Really understanding their needs, wants and challenges is the key to connect with new clients faster and easier. Looking at the marketing plan with this in mind can help figure out how to prevent the other guys from getting to your client. Also, the company is flexible to use the idea from a start-up: focusing on what's wrong with current market and what needs weren't being satisfied yet.

If you can at a place as a frustrated customer just like the people you are appealing to, they will listen, provided you have hit one of their true frustrations. But bear in mind that if an established company is in a known industry, they will have a very difficult time overcoming current perceptions – their brand is out there. In short, the best defence is a good offense.

How did they become established?

Domino case study: The Company was found in 1978. At the time it was based on ink jet technology. At the beginning of company expansion it was concentrated on geographic expansion, then its focus is slowly switch to technology expansion. Domino realized that only the revolution of technology cannot provide the success of the business, the products must be able to infiltrate into many areas. At 2000, the company starts sector specialisation so the sales can become diversification.

"The future is already here. It's just not evenly distributed." –William Gibson

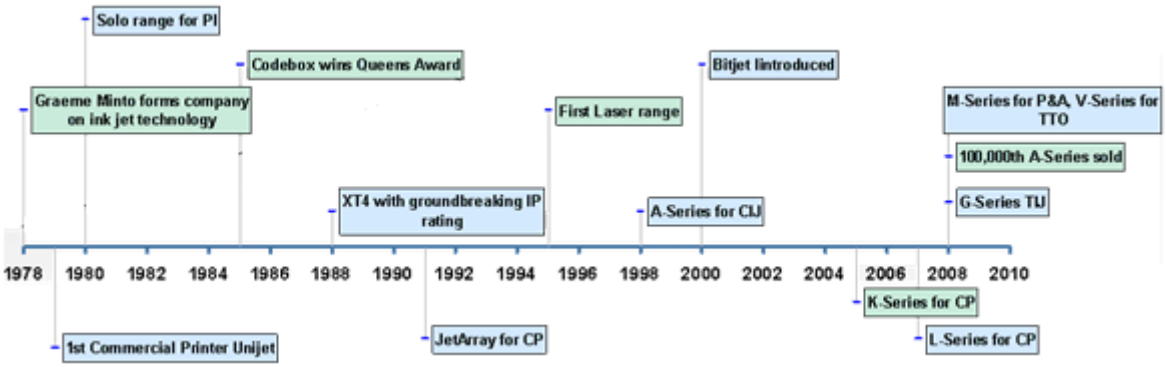

Figure 1: The history of Domino

What advantage do they have over new entrants?

- Technology advance.
- Loyal customers.
- More organized working schedule and market planning.
- Better understanding of what the customer wants.
- More reputation in the area. More reliable/realistic solution to customer enquiry.

How do they stay established?

Trying to understand what customer really wants. But it is not simple as it sounds. In the most of cases, the customers the company deals with knows how they want to experience from the product, but cannot always know how to properly express this. This is because they usually are not engineers, thus cannot describe the problem in the terms of engineering. This could result in misinterpretation of what the customer actually wants, which leads to the final design not matching the market requirement. The customer will refuse to pay for it and the amount of investment and time would have been wasted.

- "But its great technology, why don't you want it?"

Therefore the real skill is in determining the actual customer requirement and it is in capturing those desires and translating into solution concepts with technical description or specification that companies succeed (Engineering and marketing skill combination).

"Try to understand the person you are dealing with, and *how* they see the world, this is *why* I see the world as I do… "

V-model requirement analysis represents a software development process (also applicable to hardware development). Instead of moving down in a linear way, the process steps are bent upwards after the coding phase, to form the typical V shape. The V-Model demonstrates the relationships between each phase of the development life cycle and its associated phase of testing. This model nowadays is also redesigned to fit business analysis purpose.

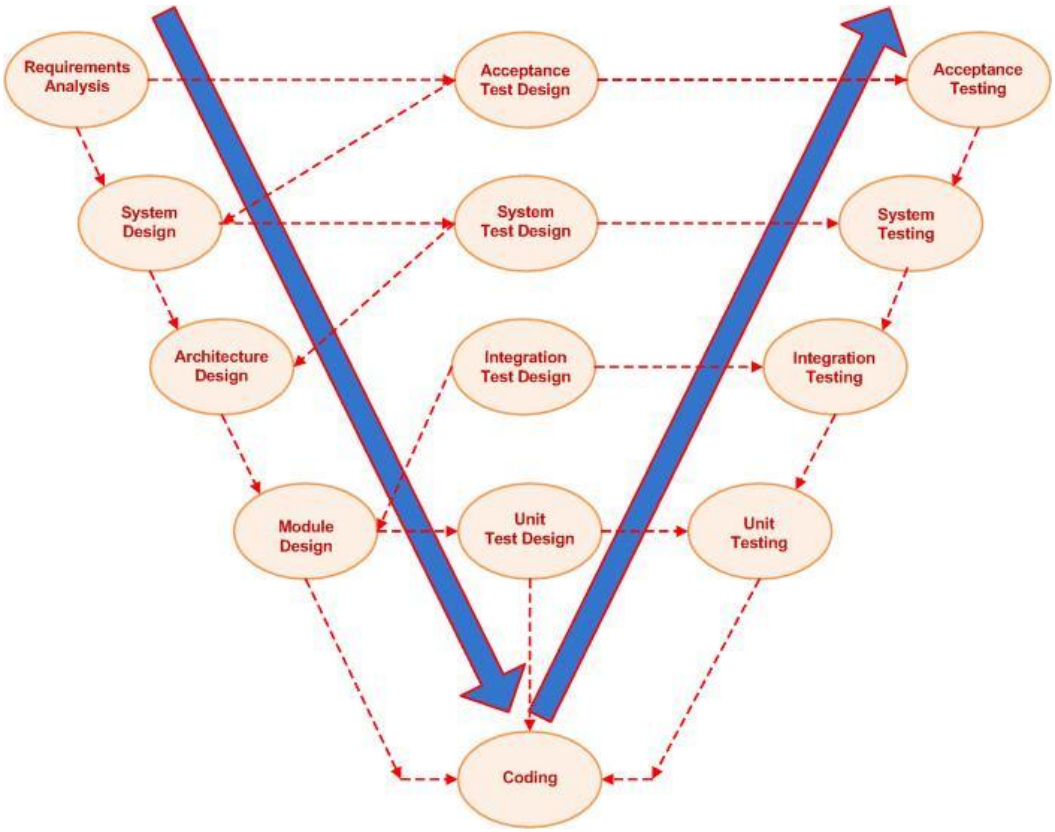

Figure 2: V-model

It contains two different phases: Verification phases and validation phases. Verification phase entails Requirements analysis (5Y), system design, architecture design, and module design. Validation phase involves unit testing, integration testing, system testing, user acceptance testing and release testing.

5Y (5 whys): The **5 Whys** is an iterative question-asking technique used to explore the cause-and-effect relationships underlying a particular problem. The primary goal of the technique is to determine the root cause of a defect or problem. (The "5" in the name derives from an empirical observation on the number of iterations typically required to resolve the problem.)

However, 5Y is not perfect:

- Tendency for investigators to stop at symptoms rather than going on to lower-level root causes.
- Inability to go beyond the investigator's current knowledge - cannot find causes that they do not already know.
- Lack of support to help the investigator ask the right "why" questions.
- Results are not repeatable - different people using 5 Whys come up with different causes for the same problem.
- Tendency to isolate a single root cause, whereas each question could elicit many different root causes.

Diversity within the company

Domino is an international company and even within each branch the developing team could be formed up by different people. By that it means the diversity of team members in culture, education psychology, etc… To be a successful company it is the key to respect everyone in the team. Diversity is a strength, not weakness.

Take the guess work out of engineering decision making

Understanding process capability is quite important for technical company. Even if you don't manufacture the products (provide the design and license to 3rd party manufacturer), you still must have 100% understanding about your design: how big is the fail zone? Testing the product to failure point helps discovering the weakness before the customer does. It could increase the customers' confident in the company and improve the brand's reputation, which means more opportunities and more investment!

Keep updating the "toolbox"

Embrace new ideas and techniques.

This presentation can be briefly described as how an established technology company makes money, from the eyes of an engineering project leader. Although he didn't really mention the general strategy Domino uses to develop for the future, he stated many quite mature product developing techniques, which is summarized from lesson learnt from the company developing though those many years.

ARM

How the company started?
Founded in 1979 (not really), started as Acorn.

How did they become established?
Acorn wanted to license the 80286 core but Intel refused because they need more powerful processor. So Acorn decides to develop the CPU on its own.
Small & cheap design for hand-held device was the Acorn's initial direction. Low power was a valuable bonus. (Because low power was driven by limited battery power on mobile device)
After first some designs, ARM was founded on 27th Nov 1990, funded by several companies like Apple, IP and VLSI. At the beginning, the company only had 12 engineers. So the company decided to hire a CEO to manage the business affairs.

How do they stay established?
Business strategies used:

SWOT analysis:

- **S**trengths: characteristics of the business or project that give it an advantage over others.
- **W**eaknesses: characteristics that place the business or project at a disadvantage relative to others
- **O**pportunities: elements that the project could exploit to its advantage
- **T**hreats: elements in the environment that could cause trouble for the business or project

SWOT analysis groups key pieces of information into two main categories:

1. internal factors – the *strengths* and *weaknesses* internal to the organization
2. external factors – the *opportunities* and *threats* presented by the environment external to the organization

Figure 3: SWOT analysis

Robin promoted some engineers into management role. Because ARM as a technology company, it really doesn't need a lot of strong marketing managers or salesman, but people have both business and technical awareness.

Mean & lean "Cash is King":
Tight cost control
Customer focused:
"Don't fight over the size of the pie, make the pie bigger"
Partnership model:

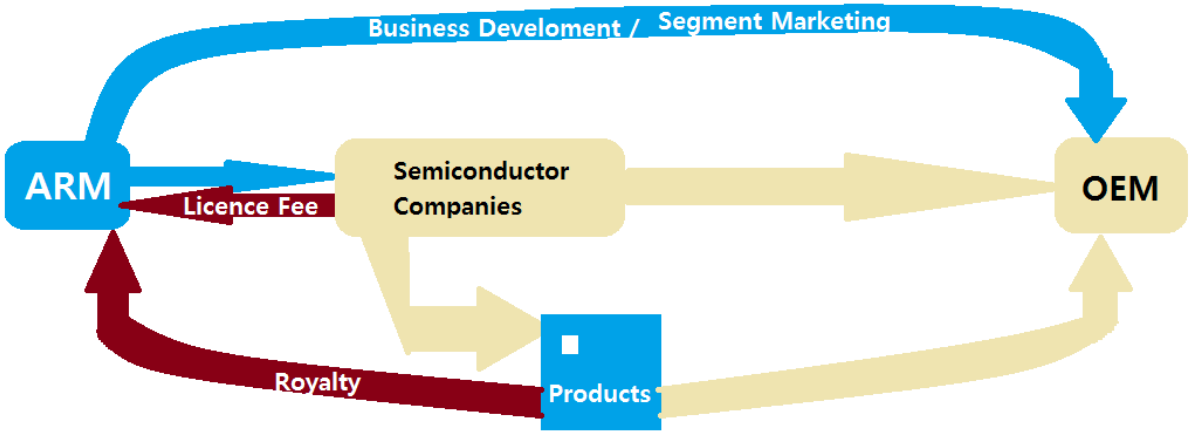

Figure 4: Partnership model

ARM doesn't manufacture the chips, not like Intel. Instead it builds up a partner relationship with other companies. (A little bit similar to Domino). In the partner network, they share the risk (the proportion of development costs)/reward (help partner to get volume) to keep the royalty of the customers (other manufacturers). Licensees are what ARM relay on!

Licensing model:
Perpetual license: Traditional implementation license
Term License: Time limited but with perpetual manufacturing rights
Per use license: single use, time limited with perpetual manufacturing rights
Architecture license: Allows optimized implementations of the ARM architecture.
Foundry program: enables fabless semiconductor companies to access ARM IP.
Design start program: Enables partners new to ARM to access to subset of ARM IP.

What advantage do they have over new entrants?
2 advantages for the design team:
No people: small team meant simplicity in design was an absolute requirement
No money: everything was done in-house using simple, home-grown tools
It is all about simplicity!
Changing era Awareness: ARM has more evidence to predicate the evolution of processor. This enables ARM to have an accurate developing direction and can move one step ahead of its opponents. (Domino mentioned this point as well)
Customers (mainly licensees) are the important factors to ARM's success. ARM listen to what customers think. Setting up branches around the world and close to customers, it helps ARM to divide staffs into small groups, faster respond time to customers' request and have more global perceptivity.
Special partnership model helps ARM to build strong relationship and loyalty. This is very important because loyalty from your customers is the complicate thing. "Got long tails"
ARM has strict control on license distribution. Special license model and customer loyalty help to prevent design leakage/ stolen and sold across different licensees.