

Analytics in Industry 4.0

Bank 4.0



BANK 4.0

The change which is required within banking and financial services at large is enormous and we must do it using [first principles thinking](#).

Customers demand low friction and immediacy.

Bank have traditionally provided three core pieces of utility

- **A value store** : The ability to store money safely (investment fall into this category)
- **Money movement**: The ability to move your money safely
- **Access to credit**: The ability to loan money when you need it

Bank 1.0 world (think Medici's in Florence) was simple. Go to bank to store money.



But as demands grew we had to start looking at technology.

ERMA was the first banking mainframe - built by MIT for Bank of America in 1953 primarily designed to do cheque processing.

Because of ERMA the account numbers were first introduced. Prior to that it used to be name and address on a physical card.



In mid-80s banks look at platforms of banking and make it self-service. So, you can bank 24/7, but you still had to go to it physically.

Fun [TV ad](#) from the 1980s by United California Bank promoting their ATM machine.



With internet boom in the 90s, **Bank 3.0** was bank anywhere anytime.

Trust changed hands from a physical place to online, a set of technologies.

Today, it is not your bank charter that makes one trust in your bank but the utility of your bank.



Alibaba's Ant Financial's **Yu'e Bao**, which means "leftover treasure," becomes **world's largest wealth management fund**. Around a third or more of China's population now uses it.

No branches, no humans involved in the sale of the product. The most successful deposit product in the world today does not involve humans and is hundred percent automated.

Why do we think that is. It could be argued it is because of utility.

Next generation technology - voice based tech, personal smart assistants, augmented reality smart glasses.



First principles design thinking example in the transportation world.

Automobile changed the employment patterns, the architecture of cities and in the US it has been attributed to building the middle-class.

Model T4 production is credited for it. All this happened because of first principles rethink of transportation.



We don't need a faster horse; we need to rethink how we get from point a to point b.



iPhone is also an example of first principles thinking.

Steve Jobs did not take the Nokia Banana phone, or Blackberry Rim or Motorola Flip and try iterate on it.

He said if we take a mobile device, touch screen access, software Apps and combine them into a device, how will that work?

This is what we call first principles thinking.



First principles thinking (start from scratch) Vs. Design by Analogy, (which is where we take technology and gradually improve on it).

Design by Analogy, is what has happened to banking we have iterated on the existing models of internet, ATM, branch banking and investment advisors.

A while back **Jack Ma** used first principles thinking when talking about competing with Walmart.

He said he will beat Walmart in 10 years because according to him Walmart will have to build a new warehouse and put so many processes in place to acquire 10,000 new customers, for Alibaba it will take **2 servers**.

An example of first principles thinking in financial services is in China with Tencent WeChat. In China **98%** of mobile payments go through two technology platforms, AliPay and WeChat.

In 2022, the mobile payment was **\$22 Trillion**, which surpassed all of the card payment traffic of the world.

This is the power of first principles thinking that were used by WeChat and AliPay instead of creating a credit or debit card, they used QR codes.

It was not a payment product but it was enabling you the utility of a payment product.

Smart bank account powered by AI will replace advisors. How much should I save to take my son through college?, How much can I spend on dinner tonight?...

No human will be able to process the same amount of data.

KYC - Know Your Customer or you can call it "KILL Your Customers with paperwork" can be done better by AI.

3 billion people will come in the new financial eco-system between [now and 2030](#). Are private and public systems ready?

You cannot scale business of your future based on humans.

By 2030 **robo advisors** will manage nearly **\$100 Trillion AUM** (Assets under management), which will be half of all AUM globally.

First principles thinking in financial services means that the traditional models we thought of as the core architecture of banking are being replaced with new values for digital experiences.

Surviving this transition won't happen by adding the AI, blockchain or smart-phone tech into your existing legacy businesses but to start all over again, **rethinking the role of your business in your customer's lives, based on the fact you will always be there embedded in the world around them that is first principles thinking in financial services**

How would you design a financial system for 2030?

EMBEDDED BANKING SYSTEM

BANK 4.0

Digital Banking and Malaysia FinTech Industry