“Impact on AI Led Innovation in Fintech”

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Agenda

• Introduction
  – Evolution of the Internet

• ICT Disruption & Opportunities
  – Innovation & Digital Opportunity

• Customer Experience

• Emerging Technologies
  – AI, 5G, IoT, Big Data, Blockchain

• Impact of Technologies

• Remedies
Evolution of the Internet & Technologies

- Mobile Broadband – 5G
- AI, Machine Learning
- Virtualization, DC & Cloud
- Big Data Analytics
- Blockchain

Internet of Things (IoT)

4th Industrial Revolution

Internet & ICT not a TOOL any more

It’s a Life Style
4th Industrial Revolution

Artificial Intelligence
Information Technology

3rd Industrial Revolution
(1st Information Revolution)

Intelligence
AI SW

Information
Big Data
5G & IoT
Cloud

4th Industrial Revolution
(2nd Information Revolution)

2nd Information Revolution

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ICT/Digital Disruptions & Opportunities
What is ICT/Digital Disruption?

- Changes Enabled by Digital Technologies
- at PACE
- Large Scale
- Disrupt Established Ways of

- Value Creation
- Social Interaction
- Doing Business
- Learning
- Our thinking

Rapid Technological Changes are Like a Tsunami

Creates Opportunities
Some Examples of Disruptive Creations

Most highly valued (40b $) tech startup

Uber
The world’s largest taxi company, owns no vehicles.

Facebook
The world’s most popular media owner, creates no content.

Alibaba
The world’s largest accommodation provider, owns no real estate.

Airbnb
The most valuable retailer, has no inventory.

Something interesting is happening.
TOM GOODWIN
Disruptive Innovation

• “Playing the Game Differently”
• Creates a **New Market**
• **Transforms or Destroys** Current Market
• Products Become
  – Simpler
  – More Affordable
  – More Accessible
  – Customizable
• **Drives Growth**
Innovate to Maximize Opportunities

Equally Applicable for Professionals
Key Features of Technological Evolution

1. Like a Tsunami

2. Highly Interconnected with everything

3. Not just changing what we do & how we do it
   - Changing us
   - Changing our lives
   - Changing the way we see the world

ICT/Internet is a LIFE STYLE
Are You Ready for Technological Revolution?

- Uberization
  - Complicated New Tech & Processes
    - Very Simple with an APP

- Talentism
  - Current Jobs getting OBSOLETE
    - ICT/Tech Savvy & Innovative Employees

- NOT BIG fish eats SMALL fish but
  - Fast fish eats SLOW fish

THEN

NOW

Klous Schwab
Founder & Exe Chairman - World Economic Forum
Customer Experience
Today

The “do the basics right” Bank

– Optimized branch network and contact center
– Enhanced digital channels
– Need-based offerings and consistent sales behaviors
– Basic multichannel integration
### “Next Generation Banking” models

<table>
<thead>
<tr>
<th>Intelligent Multi-Channel Bank</th>
<th>Socially Engaging Bank</th>
<th>Financial/Non-Financial Digital Eco System Bank</th>
</tr>
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<tbody>
<tr>
<td>- Integrated multichannel architecture powered by analytics (real-time event management, etc.)</td>
<td>- Customer engagement where they spend their time (e.g. on social media) based on personal interests</td>
<td>- Bank as trust center with an extended proposition (financial and non-financial)</td>
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<tr>
<td>- Advanced digital advisory</td>
<td>- Leverage influencers</td>
<td>- “The bank where you are” leveraging the power of mobile</td>
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<tr>
<td>- Need-based offerings optimized by channels</td>
<td>- Co-creation based on increased customer intimacy</td>
<td>- M-payment services</td>
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Evolution of Customer Touch Points

- **Single Touch Point** between customers and bank
- **Multiple Independent Touch Points**
  - Bank’s Channel Knowledge & Operations exist in Silos
- Customer sees multiple touch points of same brand
- **Banks have single view of customers, but operate in silos**

**Legacy**

**Reality**

**Aspiration. Should Realize soon If NOT yet**

**Nirvana**

- Customer experience a Brand (not Channels)
- Banks leverage “single view of customers”

AI has a greater Role to play
Customers Research Online with the support of Technology & Wrap up Deals in a Branch

Research Online with Support of Technology

Always HUMAN + Technology Gives the BEST

Wrap up the Deal in a Branch
Emerging Technologies
Artificial Intelligence (AI)

• A set of Technologies that **Emulates Human Thinking & Action**
• It does so by:
  – **Learning** from experience
  – Arriving at its **own conclusions**
  – Understanding **complex content**
  – Participating in **natural-language dialogues**
  – Enhancing human **cognitive performance**
  – Replacing people in executing **routine tasks**
Big Data

Aggregating data from multiple sources into one common repository
Mobile Broadband - 5G

Yesterday
- GSM/EDGE
- WCDMA

3G
- HSPA
- HSPA+

Now
- LTE
- LTE-A

Future
- IMT2020

2G
- Narrow Band (Mainly Voice & SMS)

3G
- Mobile BB (Data + Voice & SMS)
- About 3Mbps

4G/LTE
- Mobile BB with IP Core (Mainly Data)
- About 35Mbps

5G
- Mobile BB & LPWA (Mainly Data)
- Killer application: IoT

BB – Broadband
LPWA – Low Power Wide Area

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Evolution of IoT

Network of connected devices through the Internet, Collecting & Sharing data

- Internet of Documents
- Internet of Commerce
- Internet of Applications
- Internet of People
- Internet of Things
Cloud Computing – Models & Deployment

3 Models - IaaS (Infrastructure as a Service)
- PaaS (Platform as a Service)
- SaaS (Software as a Service)

Private Cloud
On-Premises/Internal

Public Cloud
Off-Premises/External

Hybrid

Hyper Converged Infrastructure

AWS
Azure
Google

NUTANIX
Your Enterprise Cloud Platform

ISaC
Intelligent Solutions

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Blockchain

- Blockchain - a *distributed ledger* that...
  - contains financial and/or non-financial transactions
  - is replicated (distributed) across a number of systems in near real-time over a peer-to-peer network; Every Participant
    - “Owns” the same copy of the ledger
    - Gets updates when any transaction is added
    - Every participant helps determine the intrinsic “immutability” of all existing records
  - uses *cryptography & digital signatures* to prove identity, authenticity and enforce read/write access rights
  - has mechanisms to make it hard to change historical records, or at least make it easy to detect when someone is trying to change it
Blockchain for Anti Money Laundering (AML)

- Global Money Laundering (ML) could be a threat to
  - World economy & Security

- Global ML amount = about 2 - 5% of Global GDP = $2 trillion USD

- Global spend on AML compliance = $8b USD; Only < 1% of ML can be seized

- An AML system built on blockchain can leverage
  - Cryptographically secure
  - Decentralized
  - Immutable nature of the technology........... to identify & stop suspicious transactions effectively

- Network directory & smart contracts used to record transactions on the blockchain
  - Suspicious activity can be detected & highlighted to all related participants
Impact of Emerging Technologies
AI Deployments

A further 4% have plans to deploy in 2018.

- Knowledge gathering/investigating/developing strategy: 59%
- Piloting: 25%
- Implementing: 6%
- Deployed/in use today: 6%

Base: n = 83 Gartner Research Circle Members

Q: What is the current stage of artificial intelligence (AI) solutions adoption within your organization?
AI in Fintech Innovation

- Improve **Security**
- Reduce Processing Times, Duplicate Expenses, Human Errors & Avoidable Expenses
- Automation
- **Robot** Advisors
- AI in **Human Resource Management**
Fintech Innovation predictions by Global Industry Leaders

- “These technologies are now reaching a point where they can really change consumer experience, and that’s one of the reasons for our investments in this artificial intelligence space. These algorithms and the way they make decisions are becoming so good that we as consumers will increasingly leave our devices to start making decisions for us. And it’s cool and it’s sometimes worrying, but in the bigger picture it’s going to change the way we live. And I think that’s not very far away now.”

Ajay Bhalla – President of Global Enterprise Risk and Security, MasterCard
Fintech Innovation predictions by Global Industry Leaders

• “The number one thing that’s going to occur in 2018 is fragmentation of the marketplace as we know it today. The days of big banks delivering everything and being specialists in everything are over. Some of them might still not accept that but the reality is that it’s happened. You’ve got ring-fencing in the UK occurring, and it will be in place by January 2019. Where you’ll get to is a situation whereby there’ll be transactional banking, which everybody needs – it’s how we pay bills and how we receive our salary. And it’s the same structure for businesses.

Then there’ll be different ways in which we consume financial services – things that we use occasionally like a car loan, a house loan, or a holiday loan. And the market will change to encourage customers to seek alternative choices as opposed to feeling reliant on one choice”

Nick Ogden – Founder and Executive Chairman, ClearBank
How AI can improve Customer Experience (CX) in Banking

1. Personalized Services
   - Personalized products & services

2. Advisory Services
   - Portfolio & investment advice

3. Improved Support and Security
   - Chat-Bots
   - 24*7 service (near Real Time)
   - Natural Languages

“AI is the NEW UI”

“Always CORE of CX is Human & AI”
Summary: Emerging Technologies

IoT | Mobile Apps | Social Media
---|-------------|-------------
Collecting Data | Big Data Analytics | AI for Human Resource Management

AI & Machine Learning Algorithms
Robots
Automation

AI + Human

Security
Blockchain
Data Centers & Cloud
5G
BB & LPWA

Personalized Services
Customer Experience
Advisory Service
Omni Channel

Improve Employee Experience
Improve Employee Engagement

Augmented Worker

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Impact of Emerging Technologies

• JOB Losses?? May be Yes......But NO

• Roles of professions change with Technology/ICT/Internet/AI

• Past Experience:
  – Routine Jobs automated would create jobs elsewhere

• Consumerization of ICT/Technology – Empowers Human
  – NOT people ADAPTING to technology, But technology ADAPTING to people

Before AI

Disruption confined to One Sector
(eg. Car Manufacturing Robot)

With AI & Emerging Technologies

Disruption happens Across Sectors
(eg: Analytics based Digital Marketing)
Way Forward in the **NEW NORMAL**

• **Professionals to be Relevant**.....Need
  – Proactive, Continuous Skill Development
  – Knowledge on Emerging Technologies

• **Very Vital:**
  – Critical Thinking, Analytical Minds, Creativity, Habits of Research & Innovation

• **Education systems** warrant **drastic changes**

• Employers and employee groups/trade unions have a great role:
  – Advocating governments and educational institutions for a **CHANGE**

*If you want to change the world, Start with Yourself*
Thank You

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