



# Smart Money : How Data and Machine Transform Banking

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Principal Visionary Architect

**Kasikorn Business Technology Group**



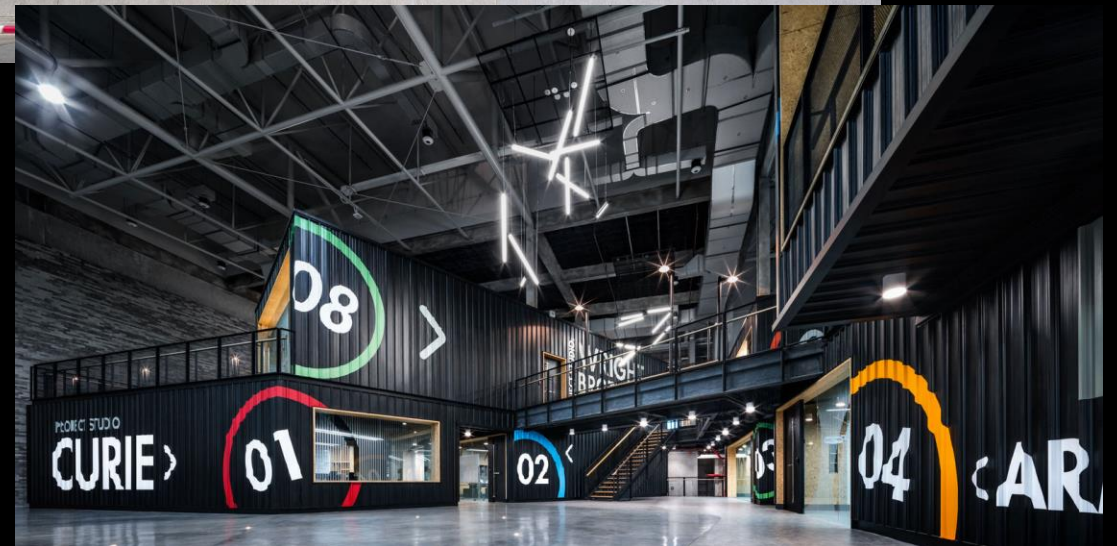
# Kasikorn Business Technology Group : KBTG

- Kasikorn Bank's technological subsidiary founded in 2015
- **Mission** : to build **technology** and innovation **capability** to provide frictionless end-to-end service and comprehensive **digital banking** solutions that would create a **disruptive** force within the industry

[www.kbtg.tech](http://www.kbtg.tech)

[facebook.com/KBTGLive/](https://facebook.com/KBTGLive/)

"KBTG" on youtube.com



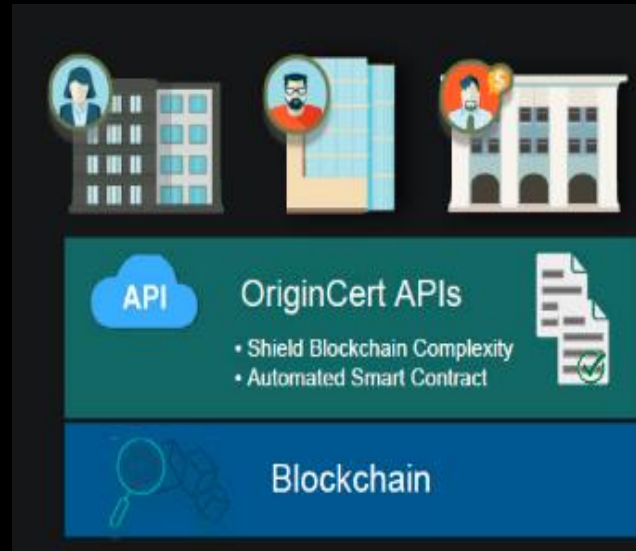
# KBTG's Achievements



**Biggest Mobile Banking  
Application in Thailand  
(>8M Users, 1M TPH)**

OriginCert

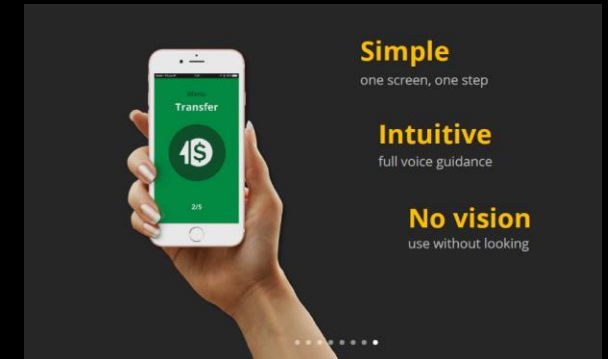
Original Certified



**1st Blockchain application in  
Thai Banking**




beacon  
INTERFACE



**Winner of 2016  
Singapore Fintech Festival  
(655 submissions, 50 countries)**



# KBTG's Focus Technologies



## Advanced Mobile Application

Bring customer experience to the next level by connecting services in everyday life



## Big Data / Machine Learning

End-to-end customer satisfactions through insight learning and cognitive computing



## Open API

Open Platform for Tech Startup to connect with bank services



## Blockchain

Reshaping Financial Business with a secure decentralized Ledger



## World-class Design

Enrich customer experience by our world-class UI/ UX designers

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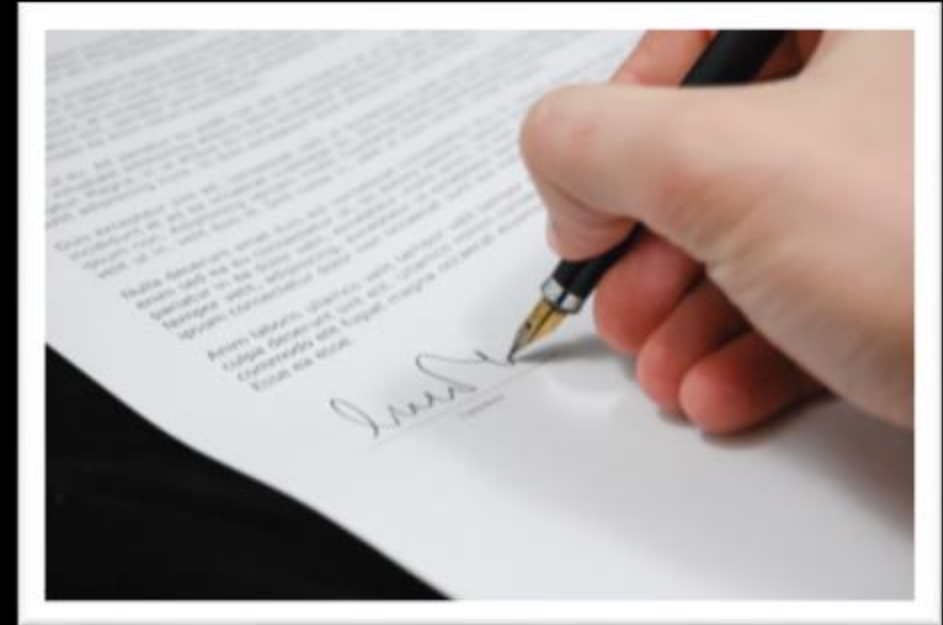
"Widespread adoption of cognitive systems will drive worldwide revenues from nearly **\$8 billion** in **2016** to more than **\$47 billion** in **2020** with **banking** named as one of the top two industries to lead the charge."

source : <https://www.idc.com/getdoc.jsp?containerId=prUS41878616>

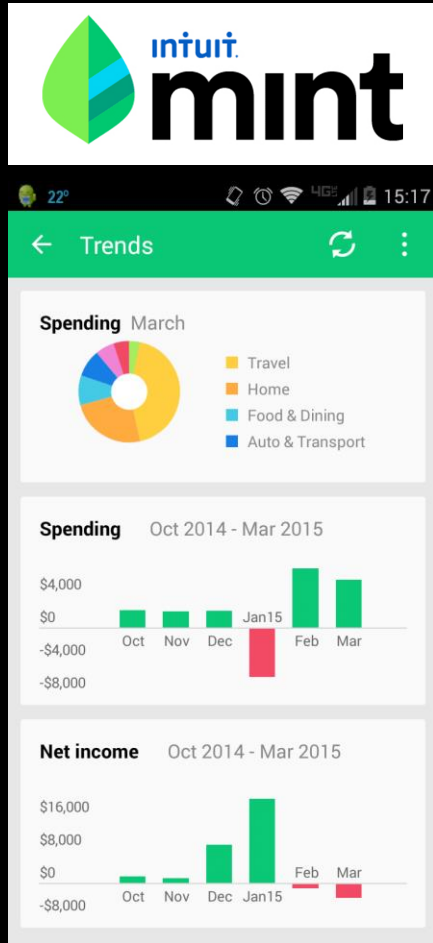
# Automated Document Processing

- *JP Morgan Chase* used to spend **360,000** man-hours per year for analyzing loan contract documents.
- In 2016, they launched a machine learning software named **COIN** (**CO**ntract **IN**telligence) to do the same task.
- The program finished the task within **a few seconds** with lower error rate.

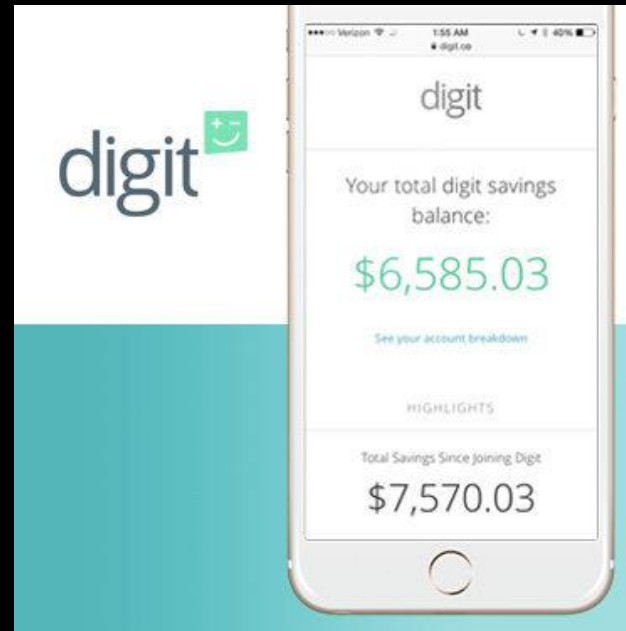
**CHASE**  **J.P.Morgan**



# Asset Management



Financial Tracker



Automated Saving

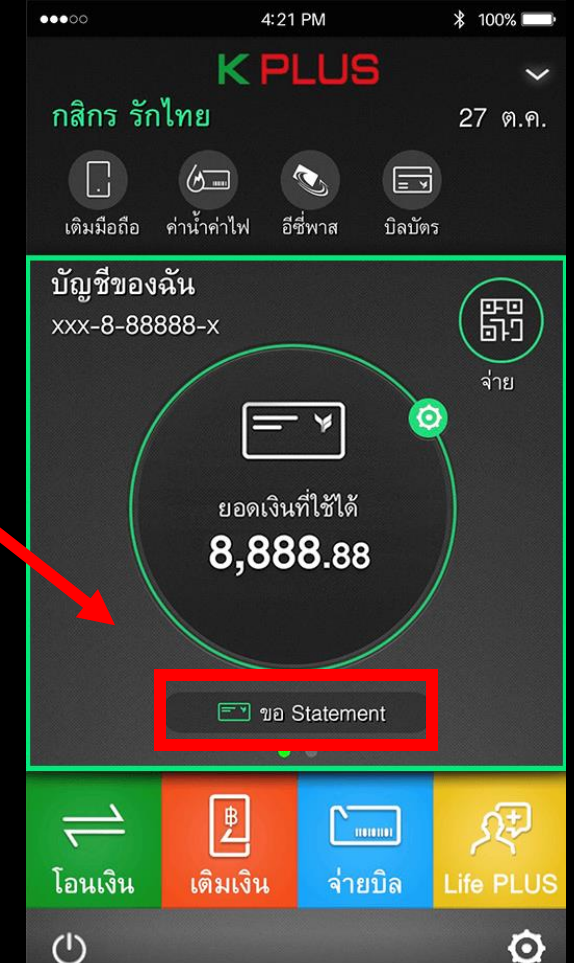
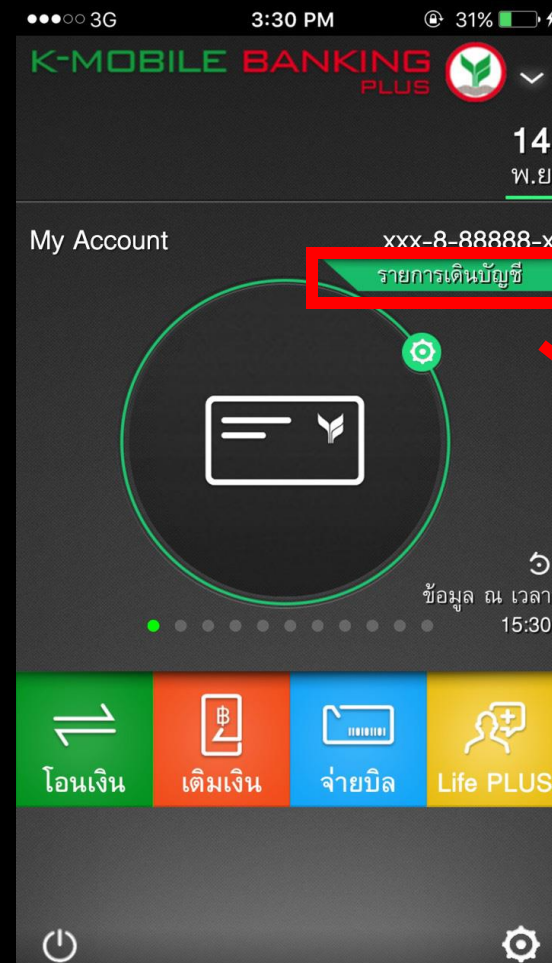


Robo Advisors



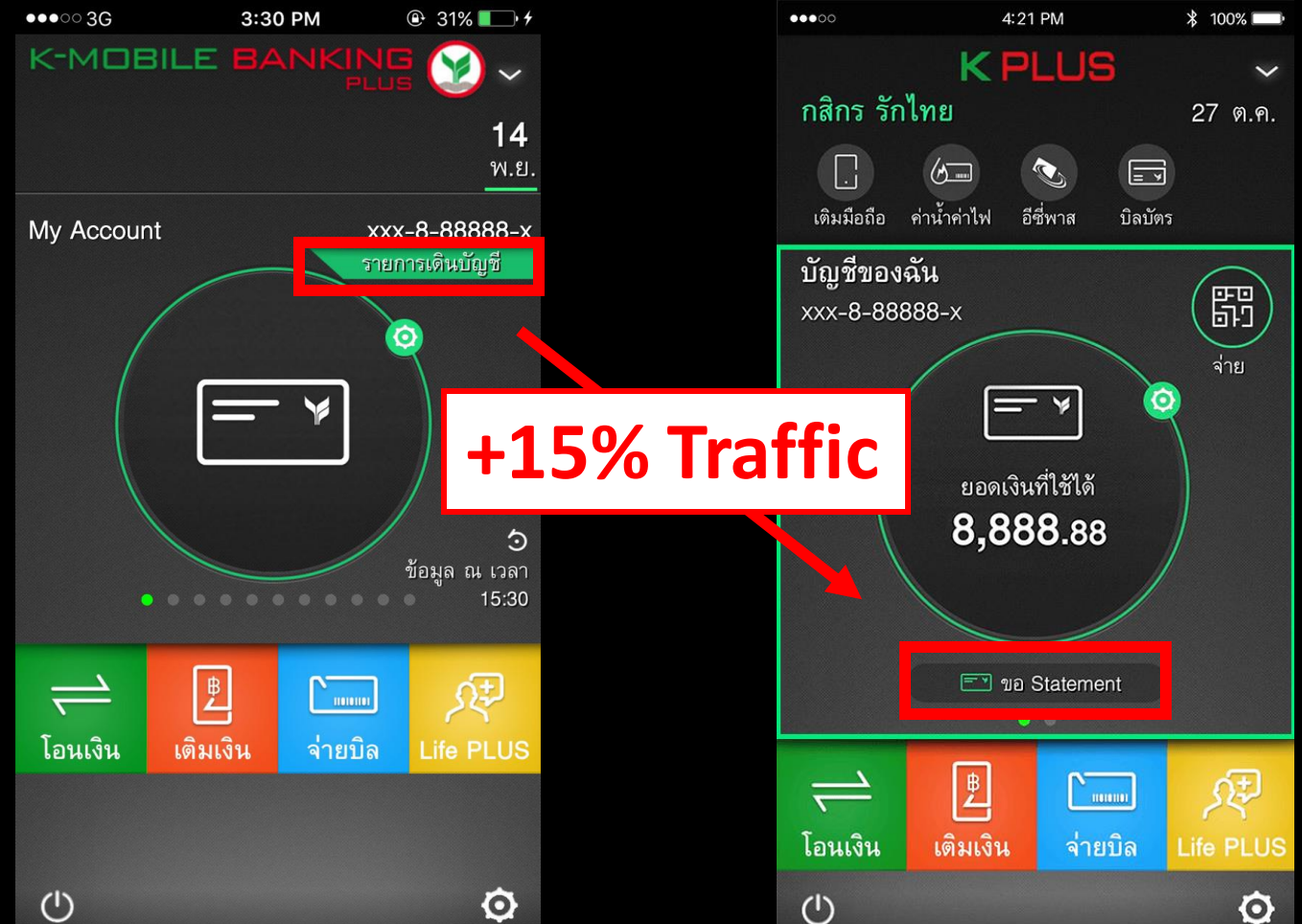
# Data-driven UX / UI

- User Experience (UX) / User Interface (UI) analytics
- Behavioral analysis
- A / B testing and experimentation



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# ML / AI in Banking : Automated Trading

- [Live Science](#) said it was now possible to predict stock prices based on the number of Google search results for financial terms such as “debt.”
- Several hedge funds such as *Sentient* and *Aidiya* are now employing AI techniques on trading decisions.
- "ML for Trading" classes are now taught by many schools.





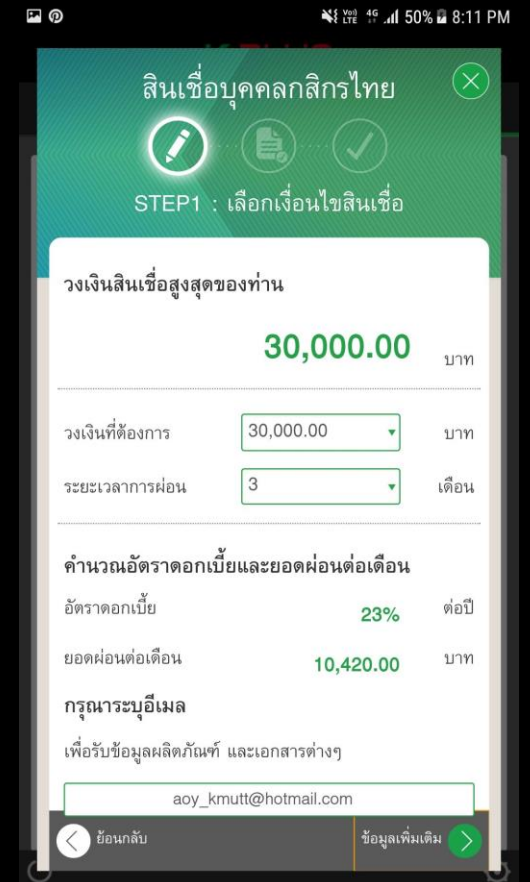
# ML & AI in Banking : Fraud Detection

- Credit card fraud causes **16 billion USD** loss annually
- However, the loss from false transaction declines is more than **13 times** of that.
- In 2016, *Mastercard* launched "Decision Intelligence" AI system to help financial institutions increase the accuracy of fraud detection.



# Credit Scoring / Approval

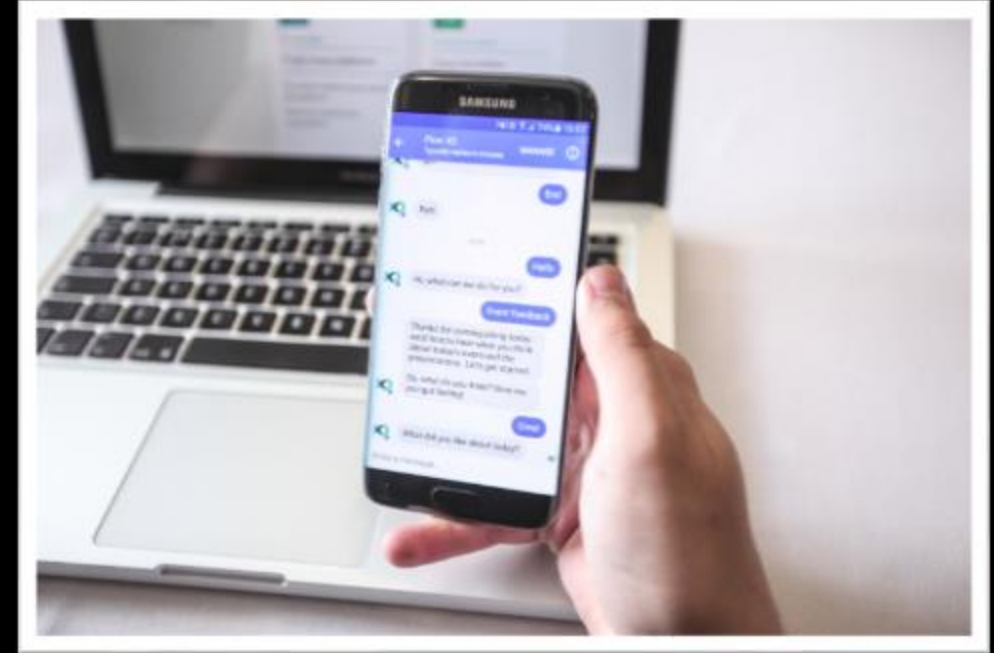
- Behavioral-based scoring
- Risk-based interest rate
- Offer loan to the **right person** at the **right time** with the **right price**





# Customer Feedback / Service

- The *WeChat* bot deployed by *China Merchant Bank* handles **2M** customers per day.
- Several companies report that AI-based operators help reduce **30% - 50%** of cases before reaching human operators.
- According to *Oracle*, 8 out of 10 businesses adopted or are adopting AI as a customer service solution by 2020.



招商銀行  
CHINA MERCHANTS BANK

ORACLE®

# Customer Feedback / Service

**Typos**



พอโดยหักออกถึงฝั่งรู้ว่าสมัครไว้พวกนี้ไป ก็เลยโทรไปยกเลิก ปกติเค้าบอกไม่ได้เงินคืน ก็เลยสอบถามว่ายกเลิกแล้วจะได้เงินคืนมั๊ย?

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**Social Language**

Replying to [@bambamcj](#) [@KBank\\_Live](#)

ตั้งกั้ววว แต่ประเด็นตะก็มีอาสาเดินมาพูดประมาณว่า เอน้านั้ยครับแถวอีกยาว 55555555555555 ตัดกั้มล้งจ้ยยยย

# Customer Feedback / Service

## Typos

พอโดยหักออกถึงฟังรู้ว่าสมัครไอ้พวกนี้ไป ก็เลยโทรไปยกเลิก ปดเคื่อบอกไม่ได้เงินคืน ก็เลยสอบถามว่ายกเลิกแล้วจะได้เงินคืนมั้ย?

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## Sarcasm

KBank ตู้ฝากเงินใช้ไม่ได้ทั้งฟิวเจอร์เลยครับ พอถามพนักงาน บอกให้ลูกค้าแจ้งสำนักงานใหญ่เอาเอง หรือให้ไปเข้าคิวกับช่องจ่ายบิลด่วน (มันใช่ปะ - -) ยอดเยี่ยมมากครับ บริการทุกระดับประทับใจมาก [@KBank\\_Live](#)

# Customer Feedback / Service



Replying to [@KBank\\_Live](#)

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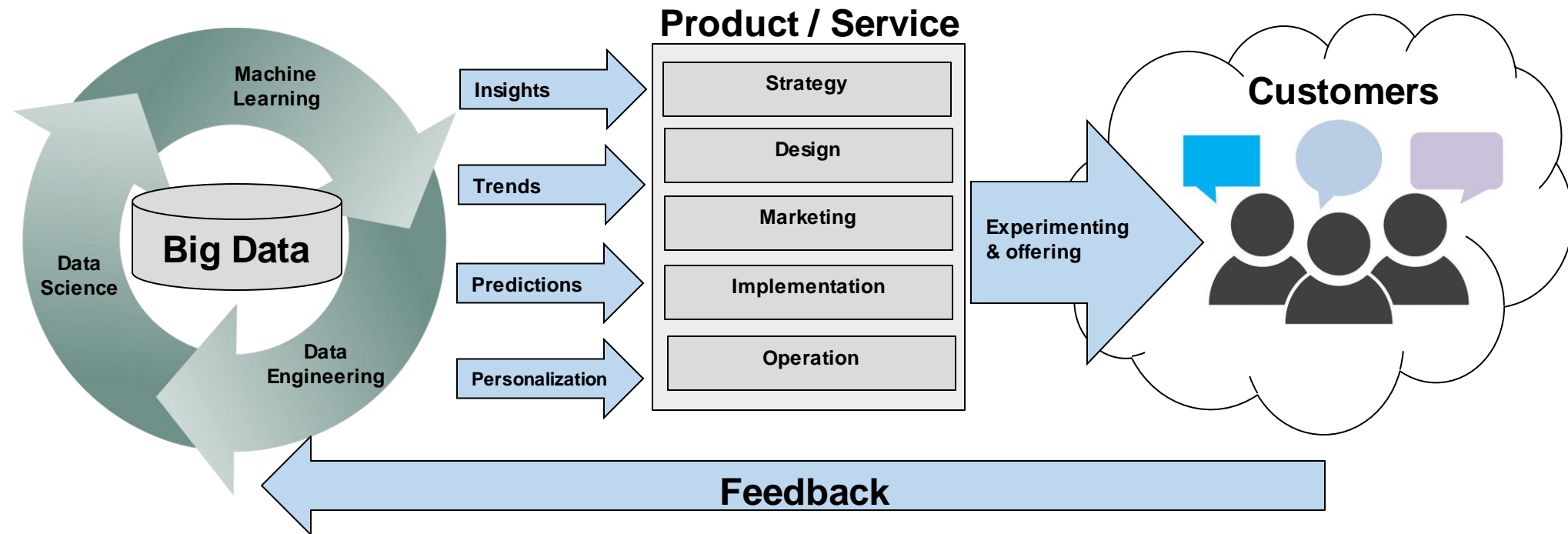
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# ML and Data Science Team @ KBTG

**Mission:** To employ machine learning and data science technology to help improve KBTG / KBANK products and services

**Team Composition :** 22 Bachelors, 3 Masters, 4 Ph.Ds  
(30 Bachelors, 3 Masters, 8 Ph.Ds by Q2 2018)



# Conclusions

- KBTG is a technology company looking to employ innovation for financial inclusion and disruption.
- Like many other domains, finance is being disrupted by big data and machine intelligence.
- At KBTG, we consider big data and machine learning as one of the core technologies that can help re-invent digital banking experience to the users.



**Thank you!**