



# Chatbots for Learning Kinetic Coach

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our vision



will be the leading global expert  
in shaping  
technology-enabled learning

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we make learning easy

we create strategic impact in learning

by providing  
technology-enabled solutions for e-learning  
to future-proof  
organisational and individual performance

# National Television



**Prime Time News on National TV**



**Hello Singapore – 30 min TV Programme**

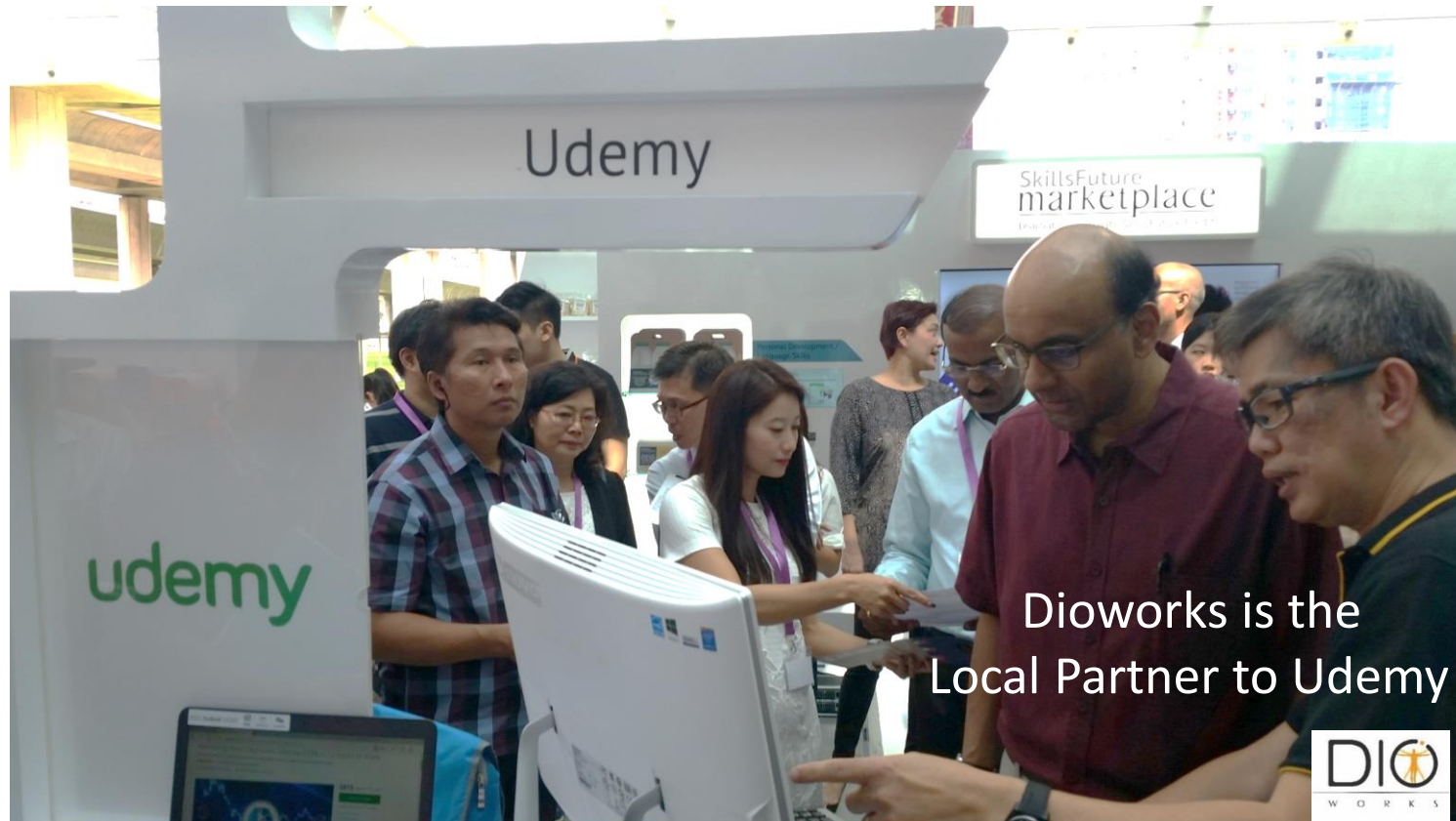


**Workforce Development Agency,  
Learning Events**



**Speaking at 2014 Adult Learning Symposium**

*Dioworks Director, Bryan Tay with  
Deputy Prime Minister Mr Tharman  
at the launch of SkillsFuture Credit*





	<b>Improve Team Adaptability To Maximise Performance</b> Dioworks <b>LIVE</b> \$80.00 - Public
	<b>Coaching Bundle: Create an Online Course</b> Dioworks <b>LIVE</b> \$210.00 - Public
	<b>Make informed decisions about your Container Shipment</b> Dioworks <b>LIVE</b> \$150.00 - Public
	<b>7 Body Language Secrets to Communicate Effectively at...</b> Imageworks <b>LIVE</b> \$150.00 - Public

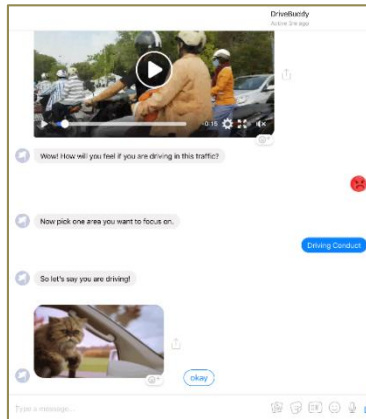


Coaching Accreditation Programme *for blended learning*

Contributing to the Community...

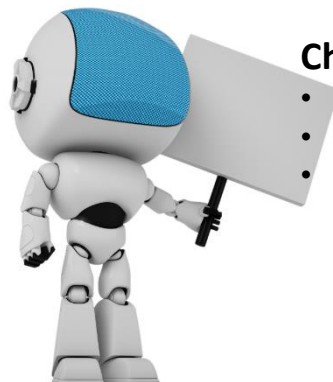
SKILLSfuture SG

Partnering Government for National Upskilling of Workforce

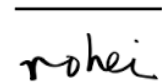


Chatbot for:

- Marketing
- Customer Service
- Learning



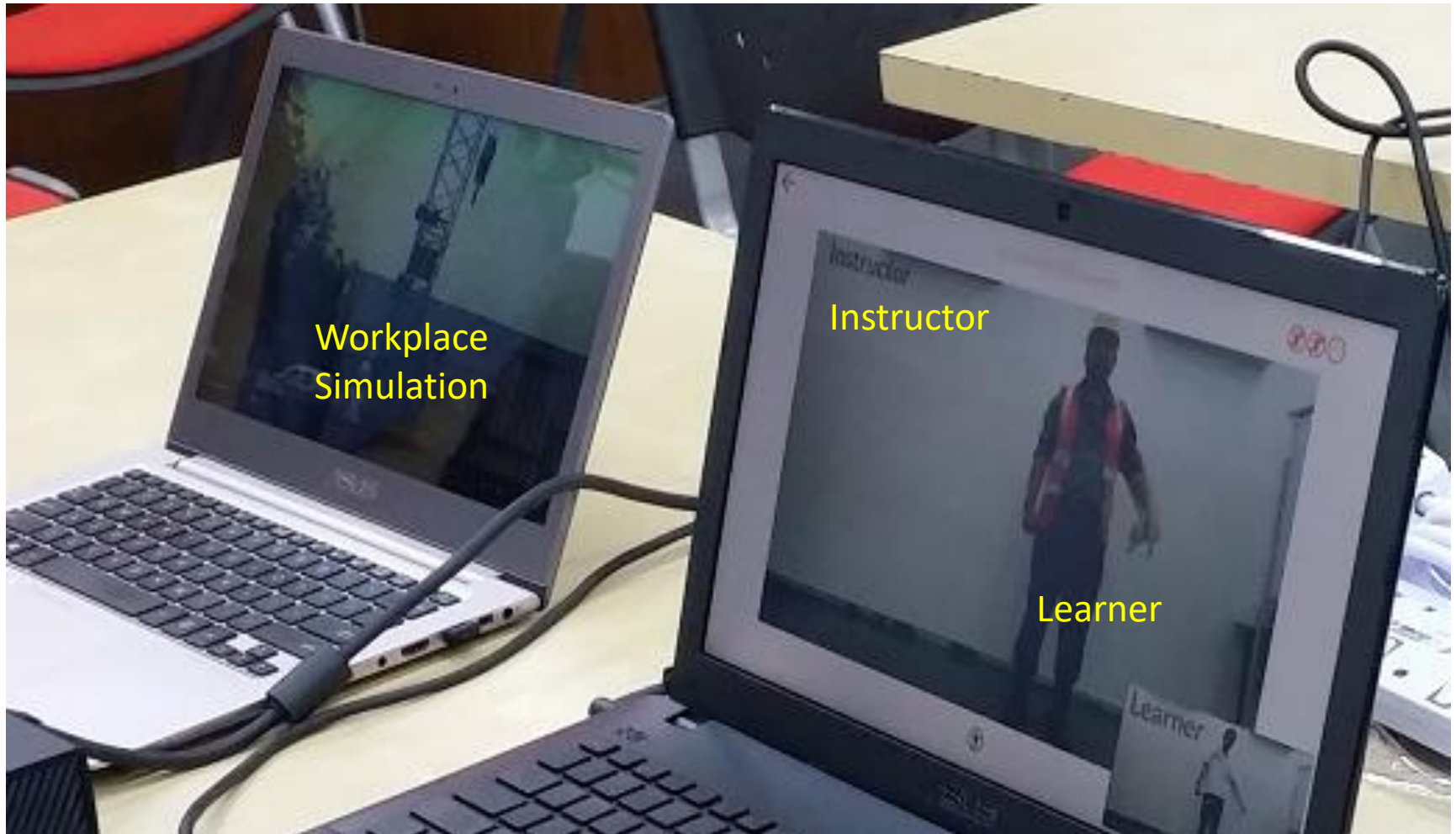
Our Customers





# Kinetic Coach

Using a video comparison reflective tool



# Kinetic Coach

## Why Kinetic Coach?

- Increases richness and **authenticity** of learning experience
- Empowers instructors to **quickly develop** new e-resources
- Is **COST** effective; allows for scaling up quickly
- Maintains **confidentiality** with **in-house** resource development
- Builds **Knowledge Management**

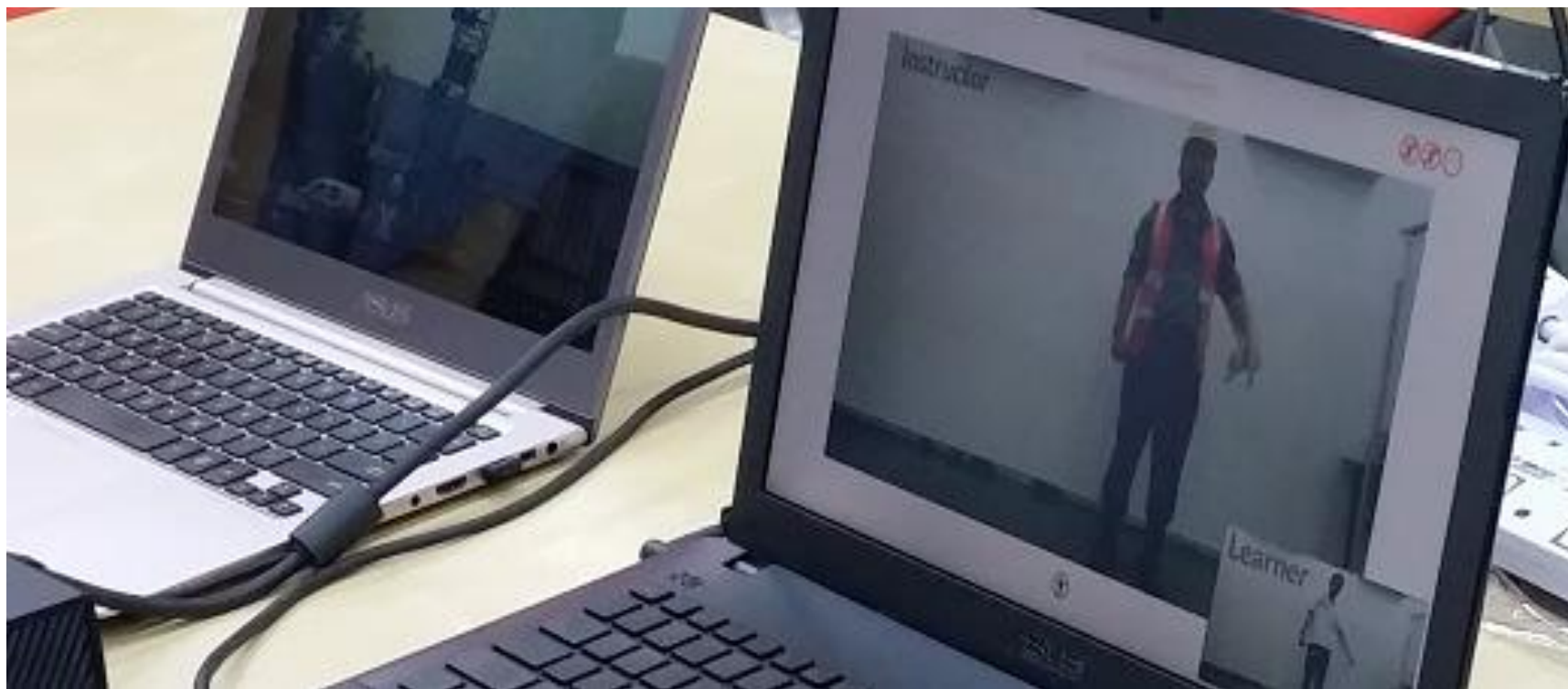




# Kinetic Coach

## How to Use Kinetic Coach

1. **Novice** level – modelling actions and conversation
2. **Competent** level – adhering to SOPs with right decision-making
3. **Expert** level – building metacognition; questioning beliefs and assumptions



Trial session at Tat Hong Training Services on Signaling Skills



Trial session at Tat Hong Training Services on Signaling Skills



Easy and simple set up

## Demonstration



# we innovate designs for learning...

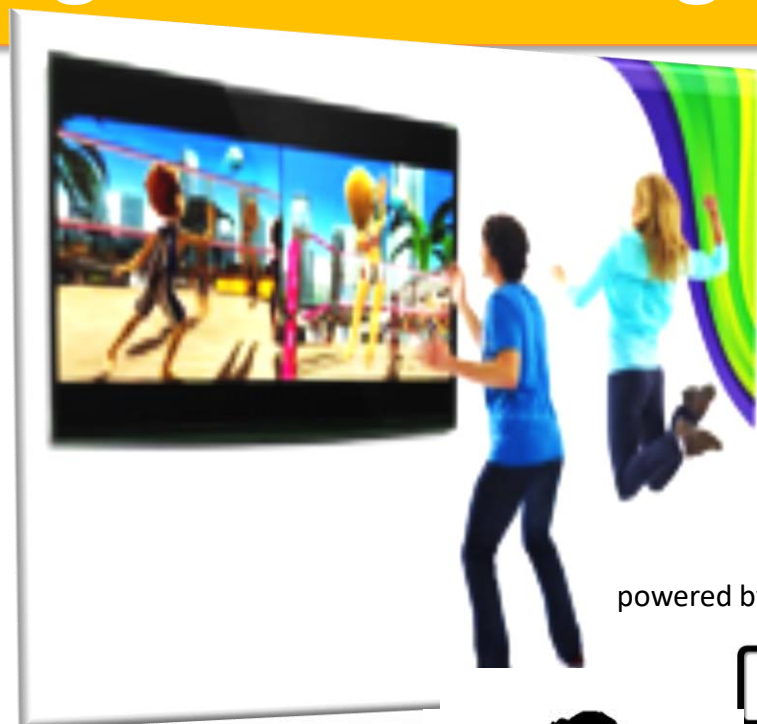


Patent Filed: 10201500609X

Automated response software  
for **psychomotor**  
training & assessment



Applied pedagogy &  
cognitive technology in  
**MOOC designs**



powered by



we make learning easy



Wide ranging applications



we make learning easy

# Using Kinetic Coach to Learn Qigong





# Using Kinetic Coach to Learn Crane Signaling Skills



# KINETIC COACH

**RECORD**

**PRACTICE**

**REVIEW**

**EXIT**

**DESIGN**

# KINETIC COACH

**RECORD**

**PRACTICE**

**REVIEW**

**EXIT**

**DESIGN**



## PRACTICE SESSION

Choose an activity.



**BADMINTON**



**SOCCER**



**QIGONG**



**BASKETBALL**



**BALLET**



**TENNIS**



**TABLE TENNIS**



**TAEKWONDO**

## BADMINTON



Badminton is a racquet sport which involves players hitting a shuttlecock over the net.

The sport can be played with one player on each side (singles) or with two players on each side (doubles).

Choose a difficulty level.



**EASY**



**INTERMEDIATE**



**ADVANCED**

## PARTICULARS



<NAME>

<CLASS>



## REVIEW

### Select Session

Activity0002  
Activity0003  
Carry Box  
Carry Box 2  
Carry Wrong  
CPR0001  
ExerciseAeroFst  
ExerciseBoxer  
ExerciseClap  
ExerciseClapFst  
ExercisePullUp  
ExerciseStretch  
ExerciseTchSkv

### Select Learner

Continue →

# REVIEW



Average Score:



# Prepares Individuals with Multiple Competencies for Contingencies

Branching situations within a  
realistic video-based Context



Body  
Memory



# Kinetic Coach



Instructors

Easily Recorded and Designed



**Generic**

For All Courses



**Scalable**

Any Location



**Any Language**

For Everyone



**Impactful**

Data Analytics



**Affordable**

Kinect & Computer

## **ROHEI Approved Training Organisation**

- used as part of the digital literacy programme, to train psychomotor skills

## **Primary School**

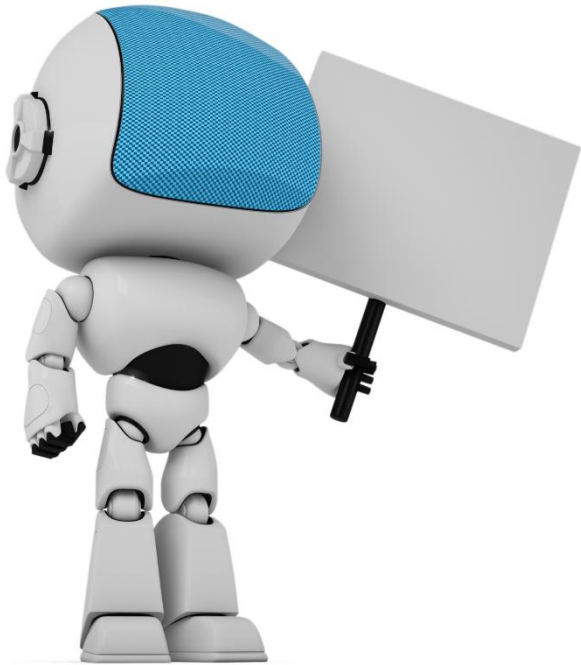
- to train sports e.g. badminton and volleyball

## **Innovation Lab, Singapore Government**

- Showcased Kinetic Coach for 8 months

## **Award-Winning for InnovPlus Competition, April 2017**

- To train security personnel to conduct body checks



# An **AI** Approach to Profiling Learners for Personalisation of Learning and Interventions

Innovative, Sustainable, Impactful



# CONTEXT & CHALLENGES



## AUTOMATION

Jobless recovery with fewer workers employed to do the same job. Some jobs will disappear forever. E.g. Credit card processing, banking procedures, truck and bus drivers

**TECHNOLOGY IS  
HERE TO STAY**



## JOB DISPLACEMENTS

More Singapore residents are transitioning to new jobs such as early childhood education, healthcare and counselling. However, mid career switchers are unclear what they need to learn

**TRANSIT FOR  
CAREER RESILIENCE**



## RETRAINING

There is no magic bullet as it is unclear how the new economy with automation and artificial intelligence will pan out. However, getting all workers to be equipped with digital literacy skills is critical.

**RETRAIN TO REMAIN  
ECONOMICALLY VIABLE**

# Value Proposition

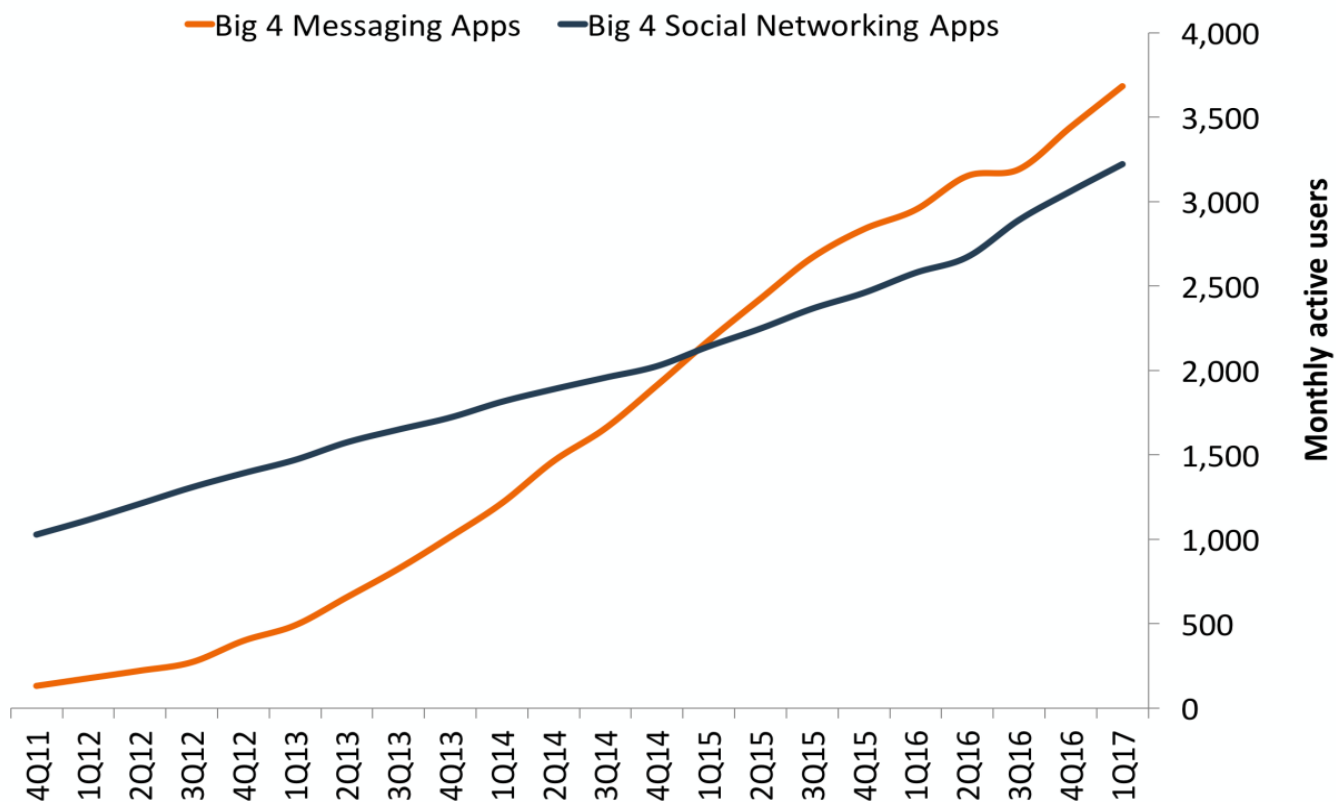
To provide a one-stop **AI-based** solution  
to **personalise** training and course  
recommendations for learners based on  
their learning profiles and interests

How do we do that?



## Messaging Apps Have Surpassed Social Networks

Global monthly active users for the top 4 messaging apps and social networks,  
In millions



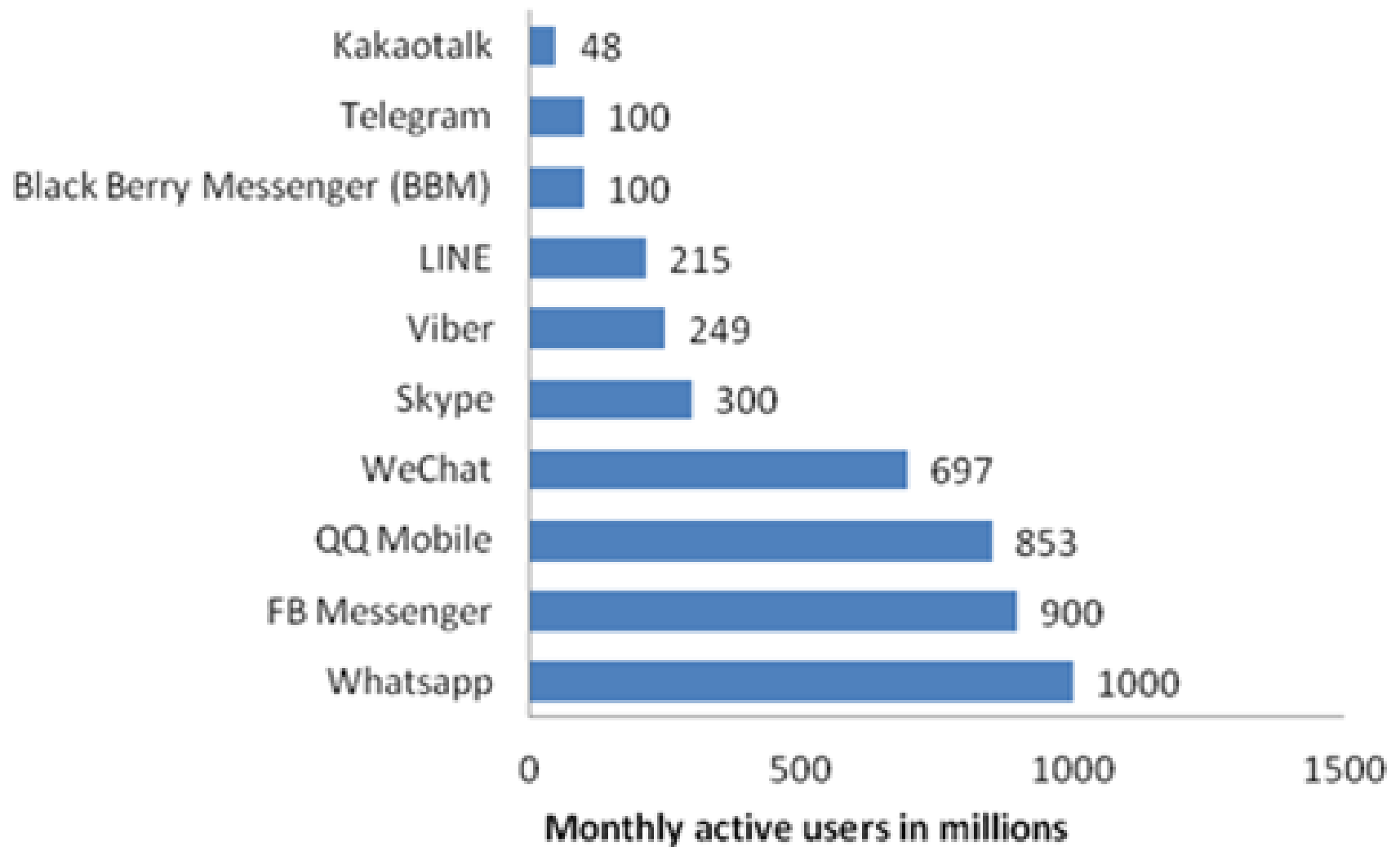
Note: Big 4 messaging apps are WhatsApp, Messenger, WeChat, Viber.

Big 4 social networks are Facebook, Instagram, Twitter, LinkedIn

Source: Companies, Apptopia, TechCrunch, BI Intelligence estimates, 2017

BI INTELLIGENCE

### *Most popular mobile messaging apps worldwide*



# Personalisation of Learning through Dynamic Profiling Driven by AI Technology



## Searching & Seeking

- Searching for Courses
- Searching for Jobs



## Targeted Profiling and Experience

- Chatbot led conversation
- Generation of learner



## Personalisation of Learning

- Data generated to inform personalisation of video nuggets
- Learning quotient established to



## Lifelong Learning & Career Advancement

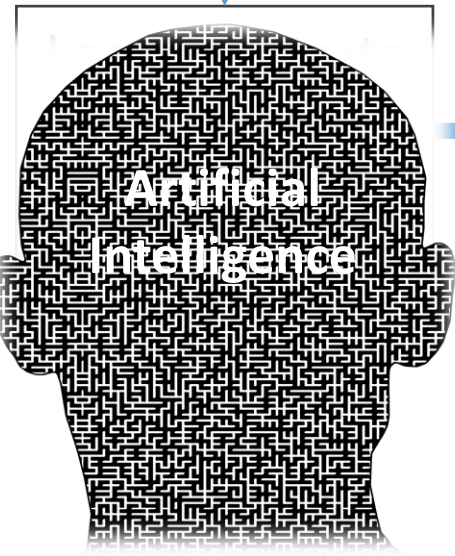
- More accurate match with courses and jobs

# The Learning Journey

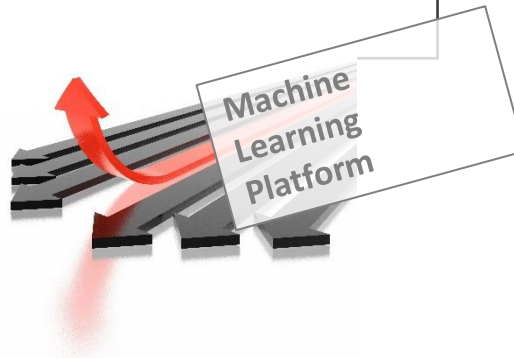


**CHAT ROBOT**

Learner enters via  
Webpage or  
FaceBook Page



Establish learner  
profile and  
interest through



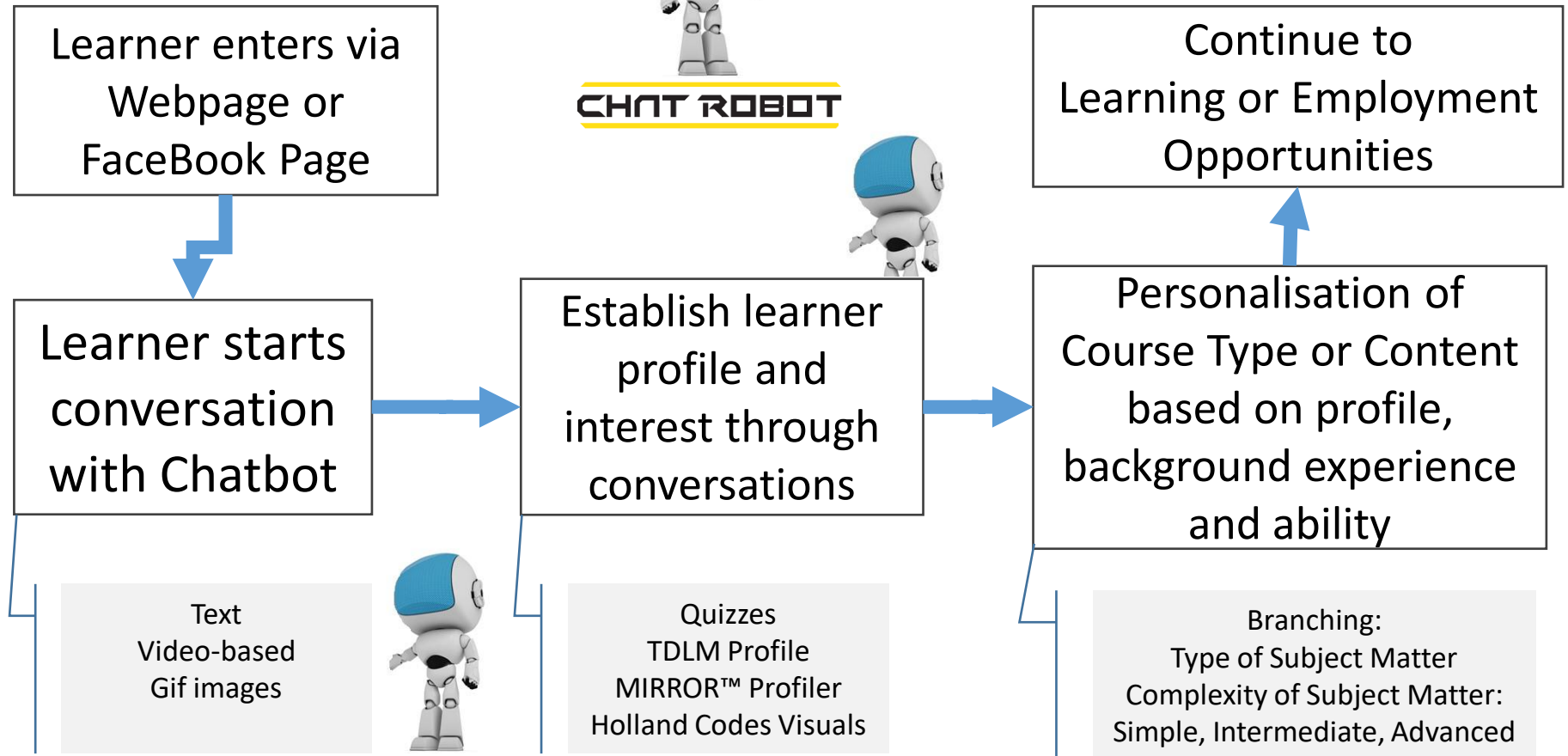
Personalisation of  
Course Type or Content



Continue to  
Learning or Employment  
Opportunities

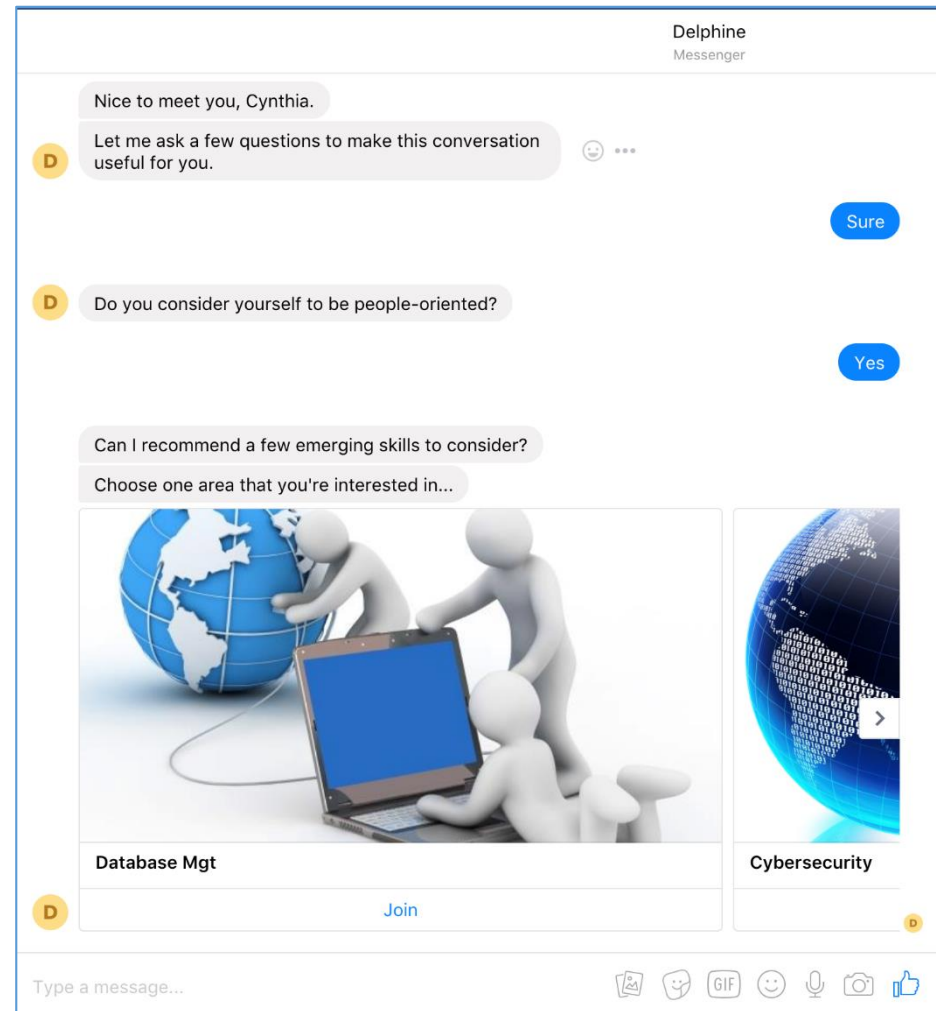


# The Learning Journey



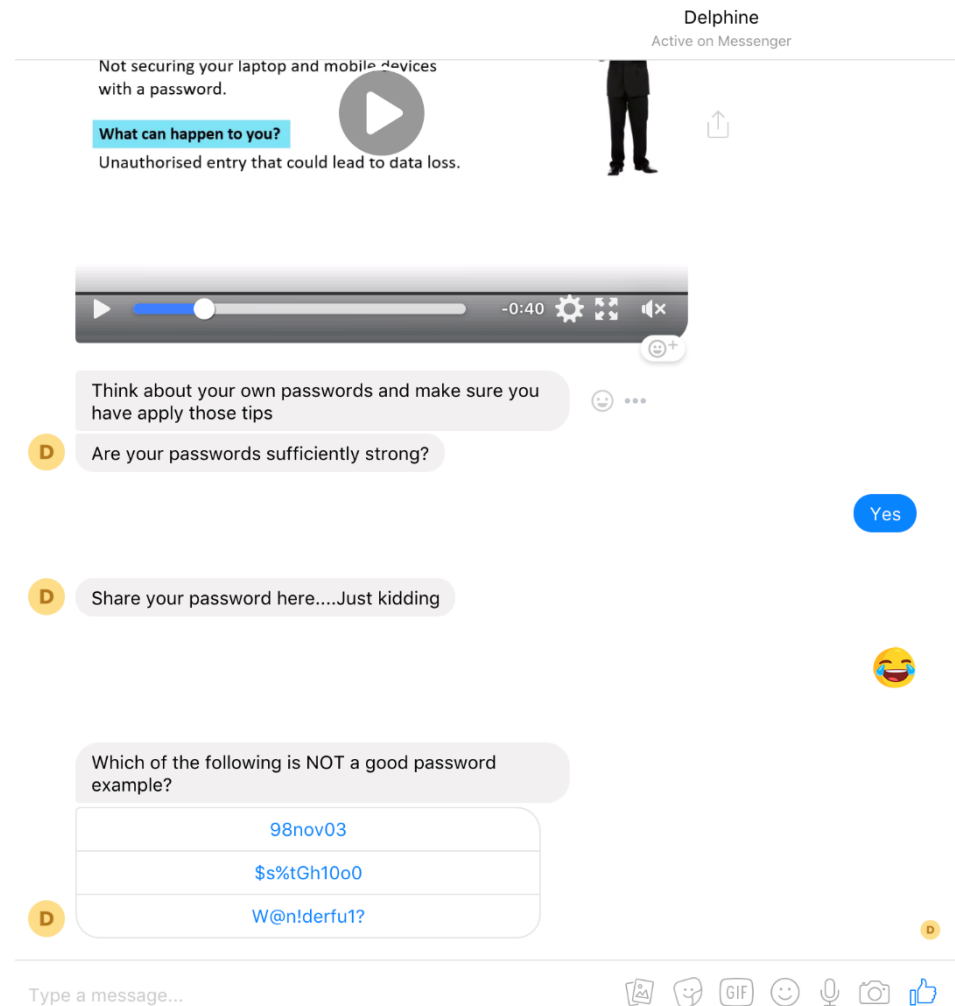
# Personalisation of Learning Through Chatbot

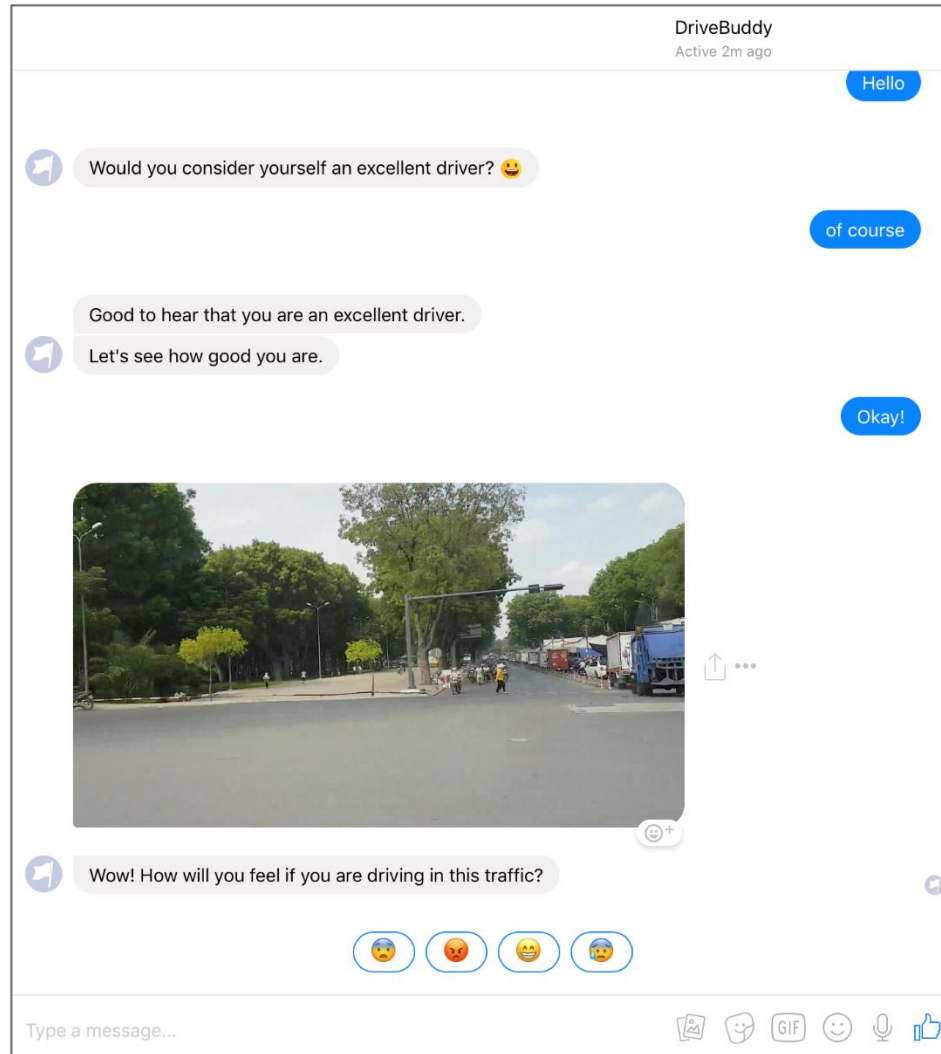
- Adaptation of learning based on individual learner profile
- Branching
- Conversation-based
- Video- and Image-based



# Personalisation of Learning Through Chatbot

- Reflective
- Personality
- Error-based pedagogy





Introducing DriveBuddy ...

a fun chatbot to remind  
drivers and would-be drivers  
how to drive safely ...

on Facebook

Interactive and video-based





DriveBuddy  
Active 2m ago

Would you consider yourself an excellent driver? 😊

of course

Good to hear that you are an excellent driver.

Let's see how good you are.

Okay!



Wow! How will you feel if you are driving in this traffic?



Now pick one area you **Traffic Rules and Si...** **Driving Conduct**

Type a message...



# Introducing DriveBuddy


...

## Branching style




## With personality





DriveBuddy  
Active 3m ago





0:15







 Wow! How will you feel if you are driving in this traffic?




 Now pick one area you want to focus on.

Driving Conduct







 So let's say you are driving!





okay

Type a message...





DriveBuddy  
Active 4m ago

Driving Conduct



So let's say you are driving!



okay



**And a storm hits!**

What should you do immediately?

Speed up and head ho...

Pull over

Slow down



Type a message...





okay



**And a storm hits!**

What should you do immediately?

Speed up and head ho...

Pull over

Slow down

Speed up and head ho...

Absolutely not, that's dangerous!

By speeding up, your car may flip over as a higher speed means your car is in less contact with the road.

I'll have another go

Type a message...





By speeding up, your car may flip over as a higher speed means your car is in less contact with the road.

I'll have another go



**And a storm hits!**

What should you do immediately?

Speed up and head ho...

Pull over

Slow down



Slow down

That's right



Slowing down gives you more reaction time especially if visibility is low. Let's try another question.



Sure!

Type a message...







**And a storm hits!**

What should you do immediately?

Speed up and head ho...

Pull over

Slow down

Slow down

That's right

Slowing down gives you more reaction time especially if visibility is low. Let's try another question.

Sure!

Uh oh, you're aquaplaning! What should you do?

Brake on/off & keep ...

Brake hard & stop

What on earth is aqa...

Type a message...



Imagine a similar chatbot to drive your customer service, marketing and onboarding services ...

Talk to us if you are interested in our freemium service ...

during promotional period only





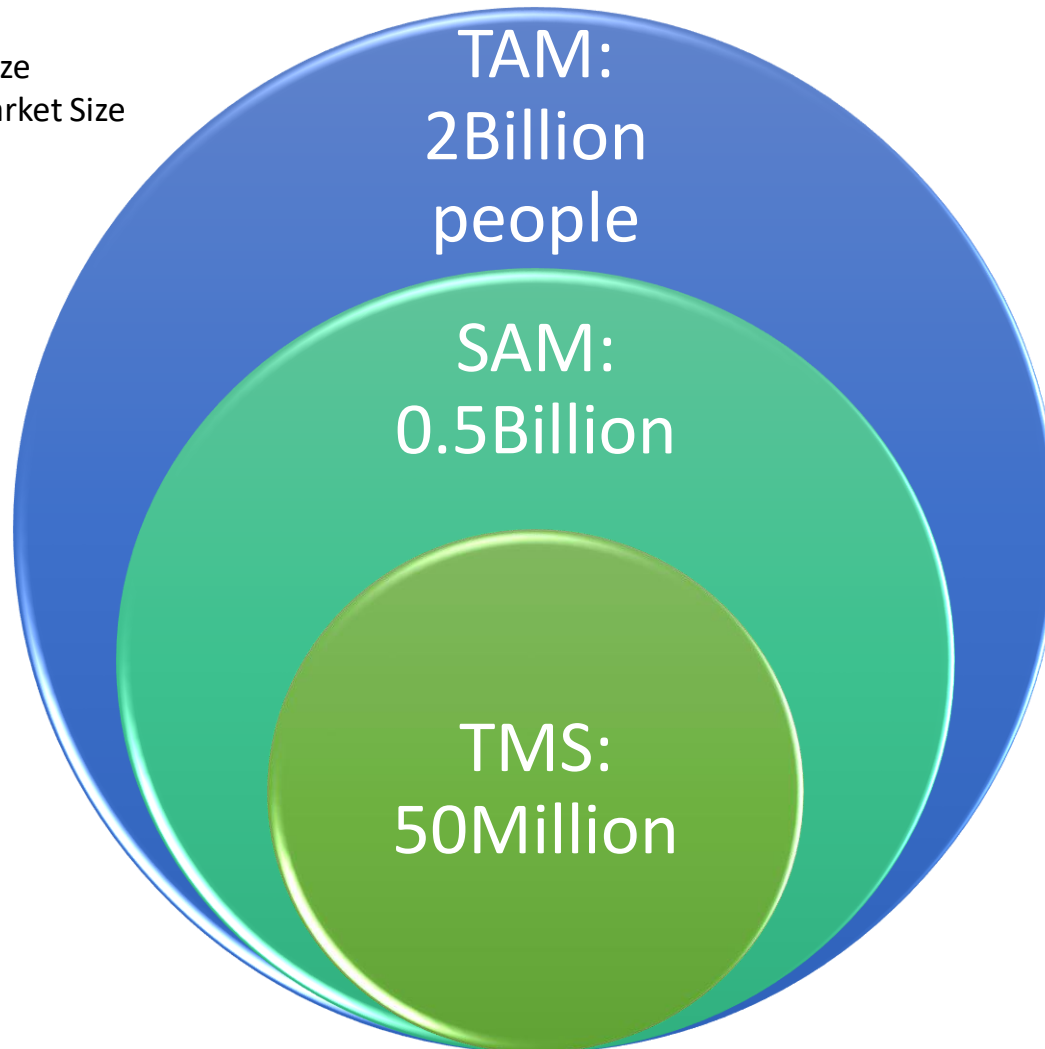
**CHNT ROBOT**

## Market Size

Total Addressable Market Size

Segmented Addressable Market Size

Target Market Share



# SUMMARY

1

KINETIC  
**COACH**

Automated  
Psychomotor Training  
Solution to hone  
physical movements

2

**CHNT ROBOT**

The new education  
coach available 24/7  
to deepen and  
personalise learning



# CALL FOR ACTION

---

1



Schools to Drive  
Adoption of  
Expert-Driven  
Psychomotor  
Training

2

**CHAT ROBOT**

Governments,  
Schools and  
Enterprises to co-  
develop Chatbots  
for Learning

# Mission



Lifelong  
Engagement  
for  
Lifelong  
Learning



# Contact Dioworks



Provide integrated online learning consultancy and solutions



Design blended learning approach using MOOCs



Develop chatbots for learning with governments, educational institutions and enterprises



Incorporate automation of psychomotor training for schools and training organisations

powered by



we make learning easy

MOOCs delivered in partnership with





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W O R K S

we make learning easy