

PhD working

*A story of a PhD holder working in Vietnam
Le Thai Hung*

Ha Noi, Mar. 14, 2022



AGENDA

- Self-introduction
 - My story
 - Turning points in my life
- Innovation Center – a case study of researching company
 - Research
 - Products

ABOUT ME

STUDENT



Graduated from School
of Electronics and
Communications, HUST

RESEARCHER



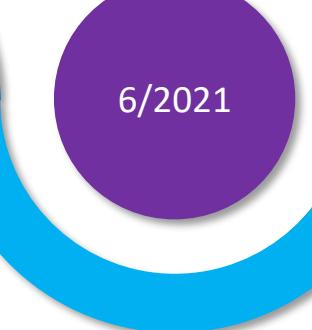
Taken PhD degree from
CCL, UoA (multimedia
communications)

CLOUD ENGINEER



In Works Applications
and then Works
Human Intelligence

SOLUTION ARCHITECTURE



In Innovation Center,
VNPT Information
Technology

PRODUCT LEADER



Moved from Systems
department to Product
Management
department

1. After doing PhD,

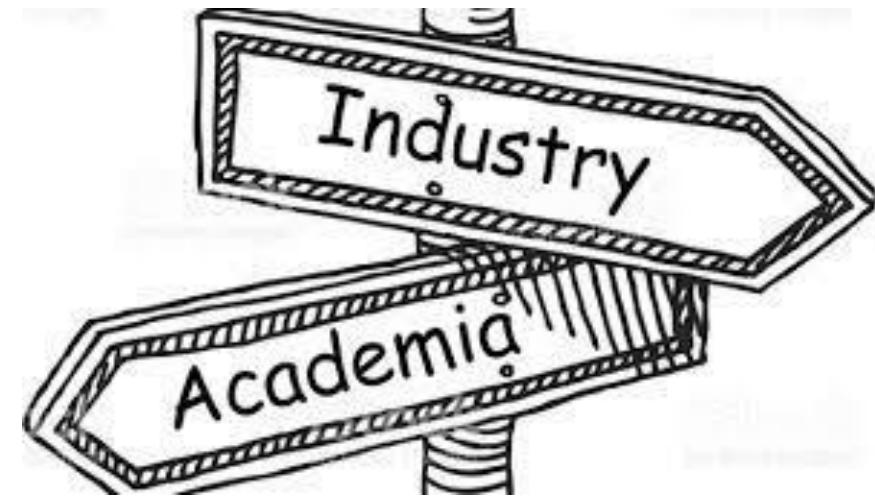
- Academic
- Industry

2. Where to go?

- Vietnam
- Japan
- Austria
- Canada

3. What's kind of industry ...

- Scientist (2/6 friends)
- Engineer (4/6 friends)



Results: 2.5 years working
as a Cloud engineer in
Works Applications, Japan

TURNING POINTS IN MY LIFE (2)

- 9/2020: I came back Vietnam
 - VNPT Information technology
- Why 9/2020?
 - Because of Covid.
 - Home alone in Japan, do everything by myself
 - 2-years experience is enough
 - Career opportunity in Vietnam:
 - VNPT established Innovation Center, aiming to innovation products/technologies
 - VNPT is a State-Owned Enterprise, which wants to change itself to service provider
 - Salary is good \$2k for professionals, considering a living expense for a couple in Hanoi around \$400

TURNING POINTS IN MY LIFE (3)

- What the company expect from PhD holders?
 - Update tech and apply them in product
- In VNPT Innovation center
 - Lead 1 product => Product manager then Product owner
 - Develop product strategy (market survey, product price, product distribution channel)
 - Manage Projects (to delivery to all customer if there is no PM)
 - Decide technology stack (or even lead AI/engineer team)
 - Lead major project
 - E.g. Credit scoring project
- In my case, teaching and coaching
 - Lead product survey team
 - Lead business analysis team
 - Lead quality process/assurance team

- If I did research in a researching company
 - Dr. Phuc Trinh, Dr. Huyen Tran
- If I did research in a university in Japan, Korea
 - Dr. Vuong (2nd PhD graduating CCL), Dr. Thanh, Dr. Duc
- If I did research in a university in Vietnam
 - Teaching only
 - \$1k (from a PhD holder in HUST)
 - \$500 (from a PhD holder in University of Transport and Communications)
 - Teaching & Doing Researching
 - HUST: \$2k (with some research) and even more (if you are in a strong group, have projects)
 - Teaching & Developing products
 - Very common before, run private business
 - VNPT-IT hires professionals to do research and to apply tech in products

II. VNPT Innovation Center – a case study of AI researching company



viettel

Google

IBM



amazon

Gần

10

quỹ đầu tư
mạo hiểm về TTNT

Gần

65

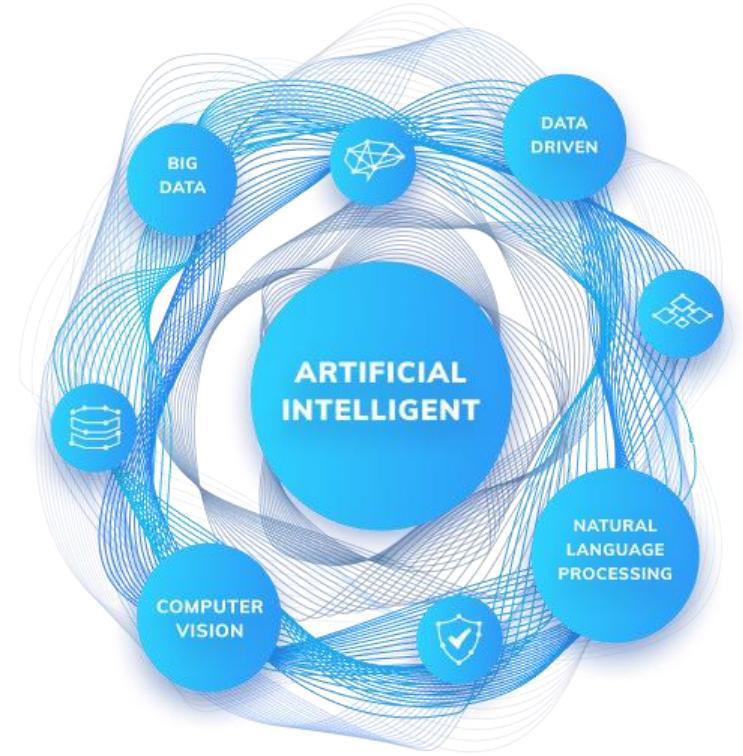
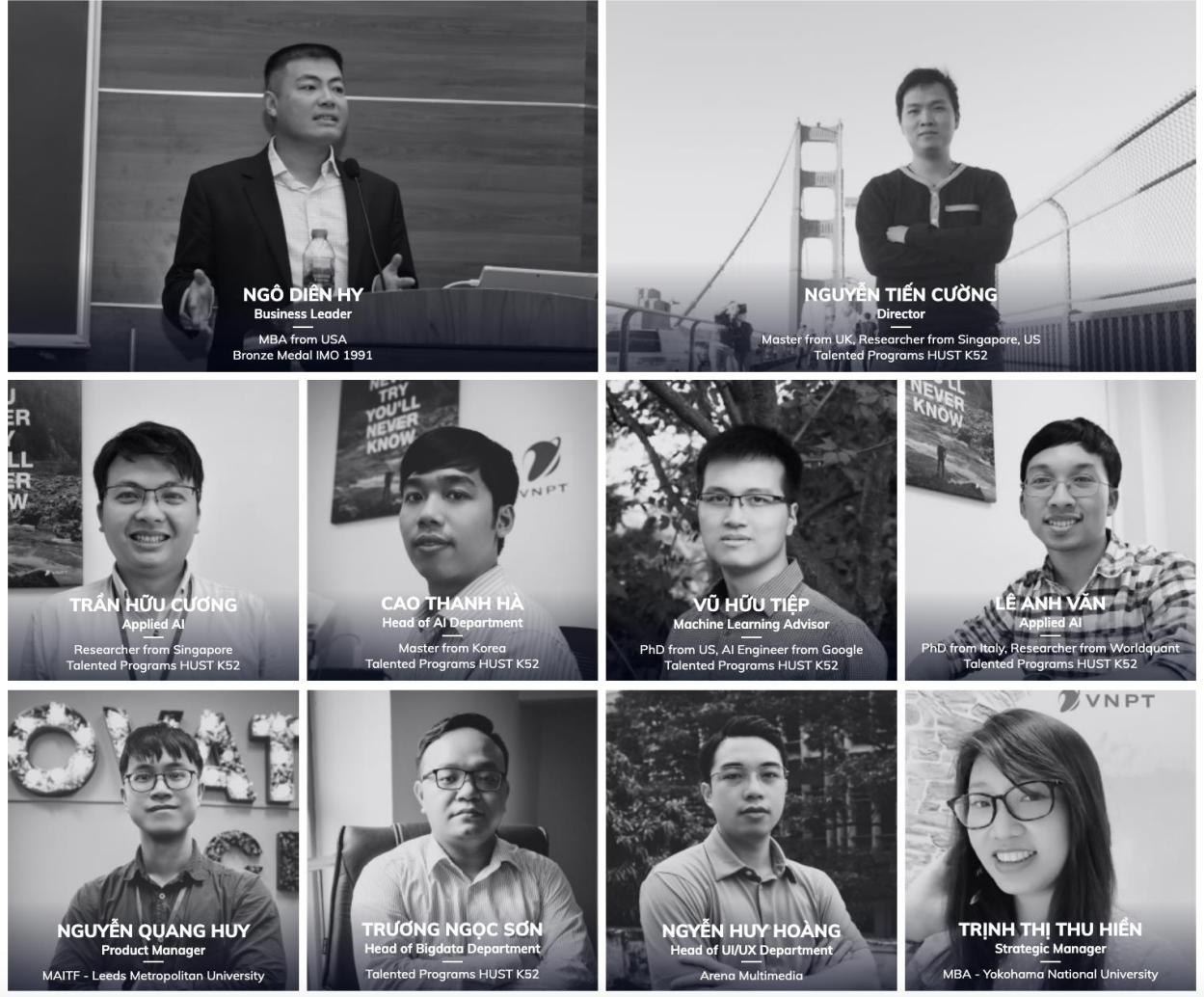
startup TTNT

Companies
focus on AI

THE PURSUIT OF
INNOVATION



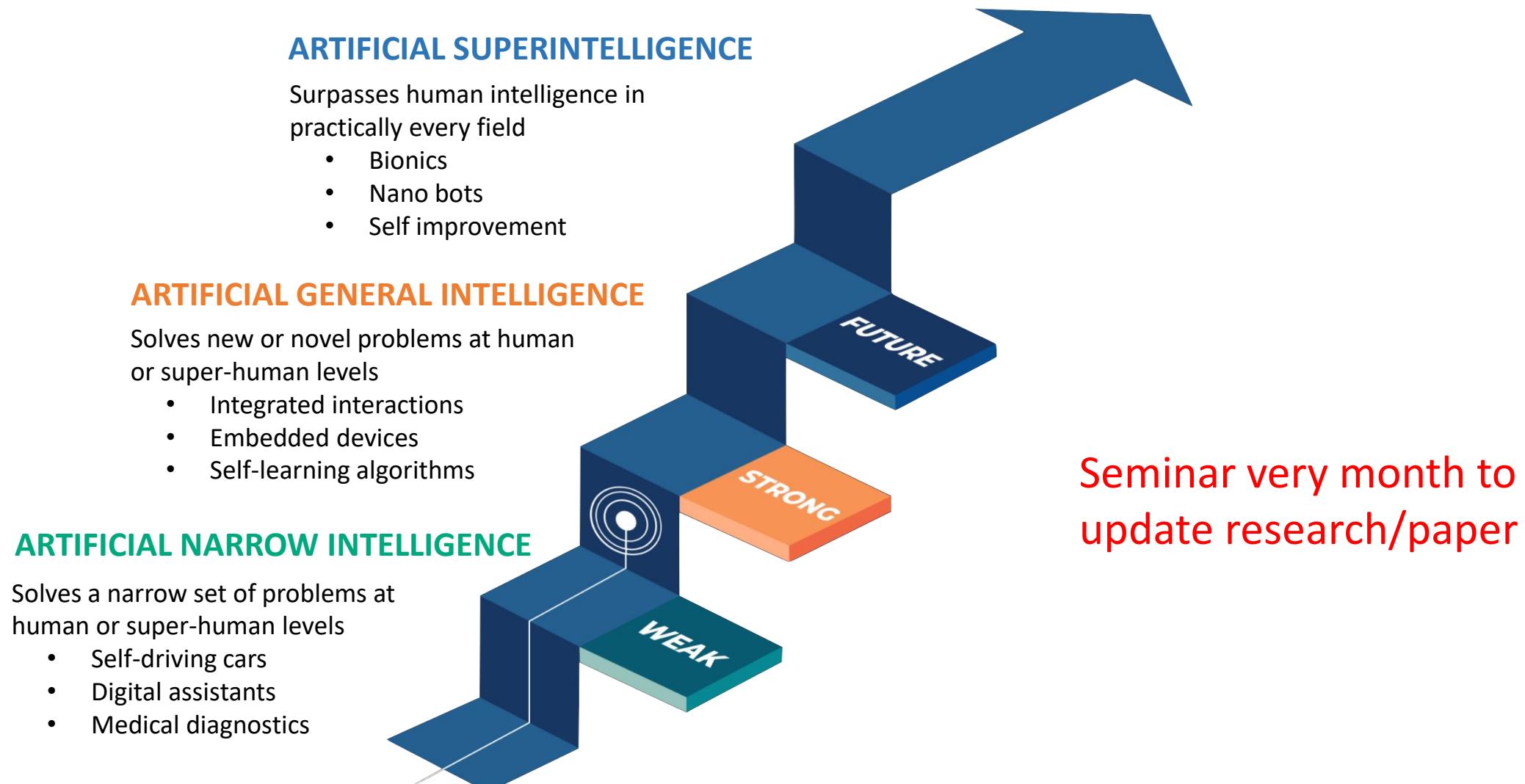
FOUNDING IN 2019, WE FOCUS ON NEW TECHNOLOGY



120+ members

- 50+: AI Engineer vs Researcher
- 10+: Software Engineer AI
- 15+: Backend Engineer
- 10+: UI/UX Engineer
- 20+: BA, Tester, PM, QA, PO
- 15+: Labeling

AI Capability Ladder



HARDWARE INVESTMENT



45 cards
V100 to
train data

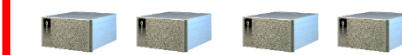


4 nodes
DGX-1
V100

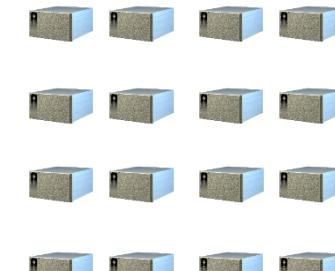


4 nodes
DGX A100

12



16 nodes
DGX A100



Hệ sinh thái VNPT AI

www.icenter.ai



iVision



iListen



iBot



iTalk



iFace



iOCR



iSocial

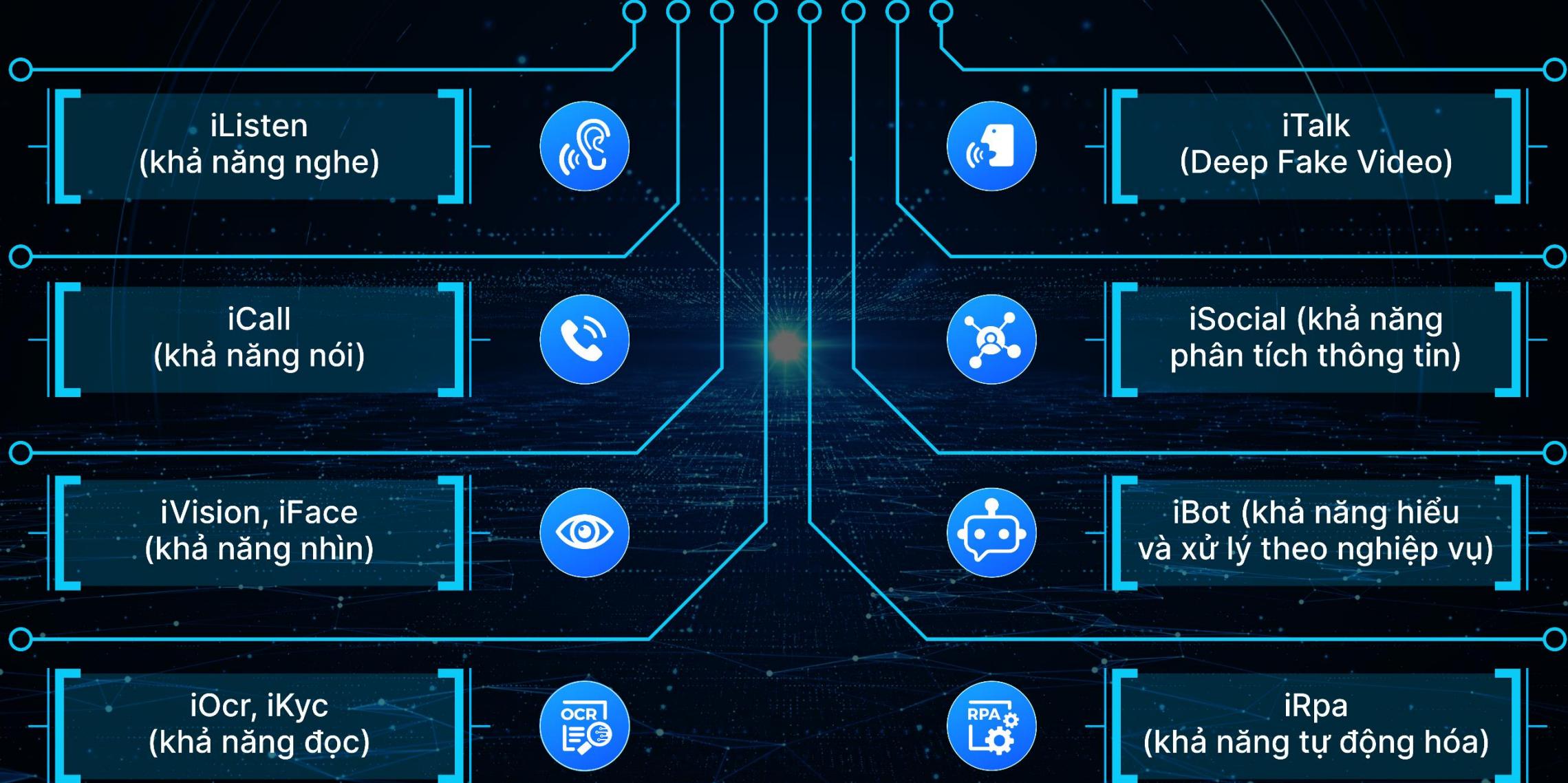


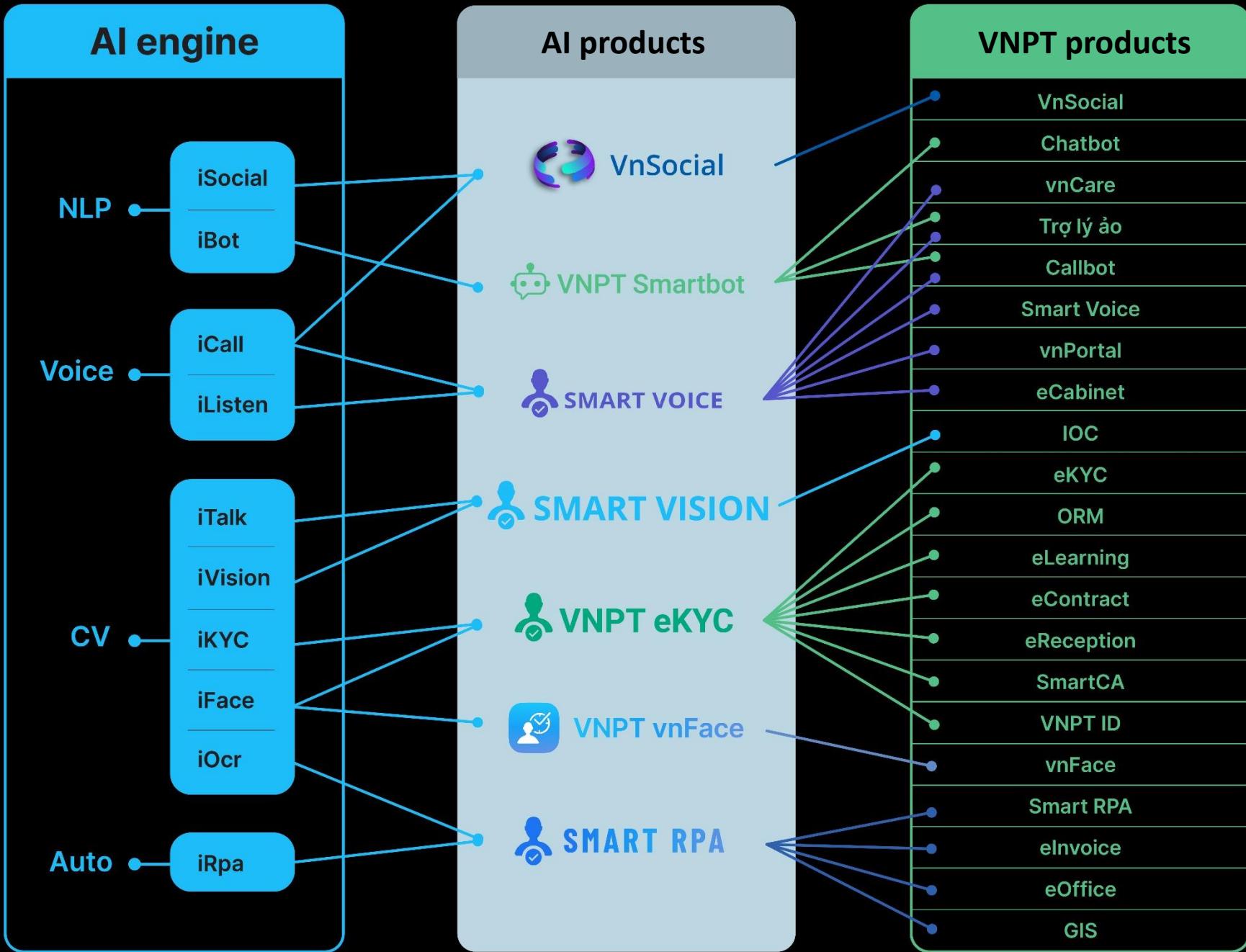
iCall



iRPA

Bộ AI engine 100+ models chia thành 8 nhánh





Tạo lợi thế cho
các SPDV khác
khi tích hợp

VNPT Product



VNPT vnFace



VnSocial



VNPT BioID



Các nhà phát triển ứng dụng
trong và ngoài VNPT



PROMOTION
IDEA

DEVELOPMENT



BRANDING

STRATEGY

API Gateway / SDK

Nền tảng



eKYC



Smartvision



Smartvoice



Smartbot



Social
Listening



Face
Recognition



Smart
RPA

Monitoring

Logging

Billing

Kubernetes

Caching

Database

Minio

Công nghệ



Artificial
Intelligence



Big
Data



IoT
Platform



GIS
Platform



Payment
Platform



Cyber
Security



Blockchain

Dữ liệu
Vinaphone

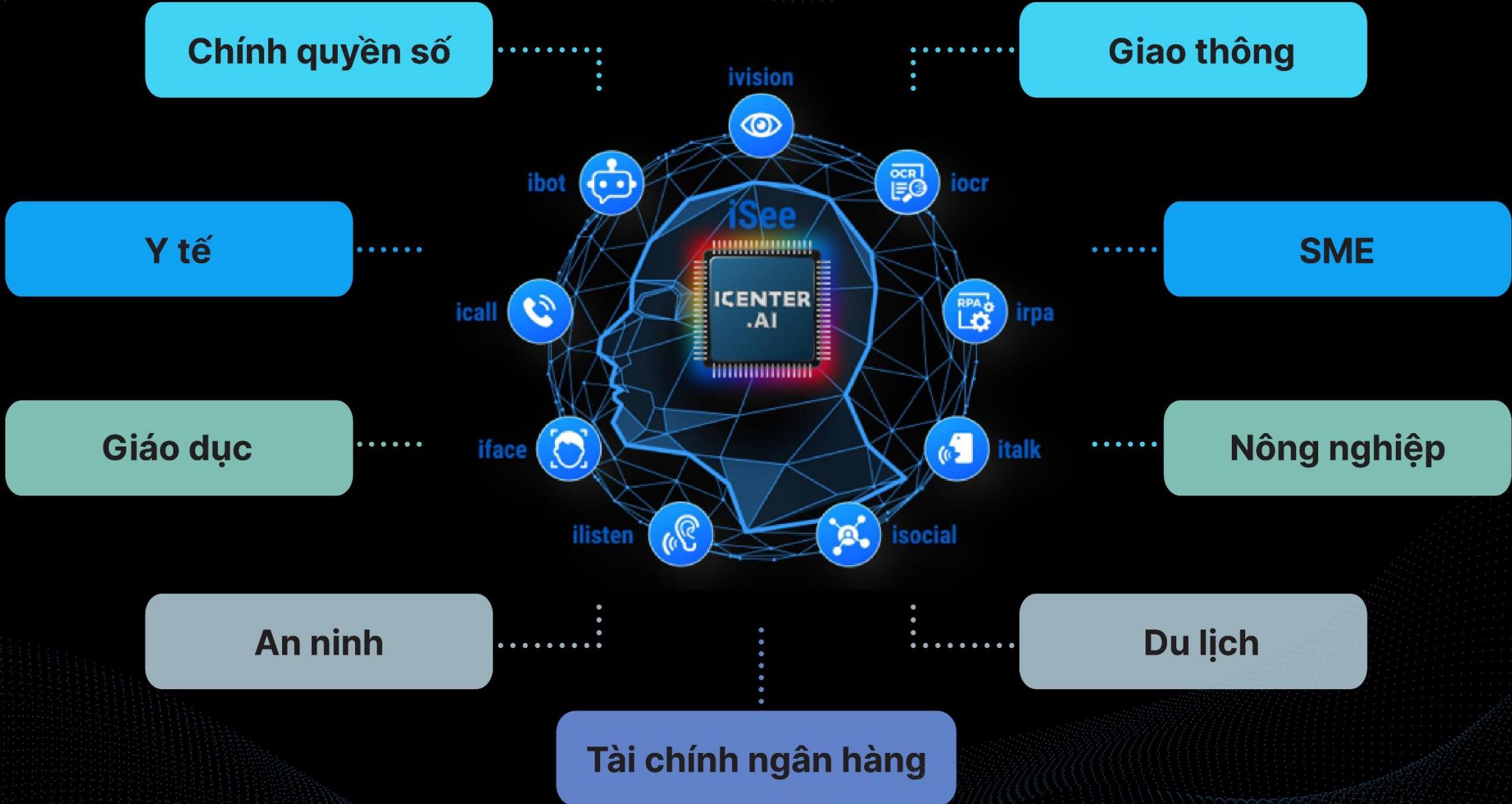
Dữ liệu
Y tế

Dữ liệu
Giáo dục

Dữ liệu
Các lĩnh vực

Hướng tới
Digital Service
Provider





VNPT MODEL QUALITY is No. 1 in Vietnam market

Group	Technology	Product	Comment
<i>Computer Vision</i>	OCR Liveness card Liveness face Face compare	VNPT eKYC VNPT SmartVision VNPT SmartRPA vnFace	VNPT is no. 1 Độ chính xác 99% bộ dữ liệu test 10.000 ảnh
<i>Voice</i>	Speech-to-text Text-to-speech Voice verification	VNPT SmartVoice	VNPT, Viettel, FPT are comparable word error rate = 2.7% with Vietnamese
<i>Natural Language Processing</i>	NLP	VNPT Smartbot	VNPT và FPT is no. 1, theirs product quality are better than of Viettel

Status

FRVT Participation Statistics

FRVT 1:1 Performance Summary

Prior Editions of Report

Overview

Goals

How to Participate

Contact Information

Subscribe

Related NIST Projects

FRVT Ongoing

FRVT 1:N Identification

FRVT Demographic Effects

FRVT MORPH

FRVT Quality Assessment

FRVT Face Mask Effects

FRVT Paperless Travel

Verification Performance

The table shows the top performing 1:1 algorithms measured on false non-match rate (FNMR) across several different datasets. FNMR is the proportion of mated comparisons below a threshold set to achieve the false match rate (FMR) specified. FMR is the proportion of impostor comparisons at or above that threshold. The algorithms are ordered initially in terms of rank on the VISABORDER dataset, calculated using $\text{FNMR} @ \text{FMR} = 10^{-6}$. The rows for a given column may be sorted by clicking on its header. Hovering over the algorithm will show you the corresponding company name. In addition, searching can be done using regular expressions and company names are searchable.

Show 30 entries

Search: vn

FALSE NON-MATCH RATE (FNMR)

Algorithm	FMR	Constrained, Cooperative				Unconstrained, Non-Coop			
		= 0.000001	= 0.00001	= 0.00001	= 0.000001	= 0.000001	= 0.00001	= 0.00001	= 0.00001
	Submission Date	VISA Photos	MUGSHOT Photos	MUGSHOT Photos 12+YRS	VISABORDER Photos	BORDER Photos	WILD Photos	KIOSK Photos	
vnpt-003	2021-12-01	0.0138 ⁽¹⁷⁹⁾	0.004 ⁽⁸⁵⁾	0.0058 ⁽⁹¹⁾	0.0087 ⁽¹⁰⁵⁾	0.0161 ⁽¹⁰⁵⁾	0.0315 ⁽⁹⁴⁾	0.0901 ⁽⁴⁶⁾	
vinai-000	2020-09-24	0.0124 ⁽¹⁶⁸⁾	0.0045 ⁽¹⁰³⁾	0.0072 ⁽¹¹⁷⁾	0.0089 ⁽¹¹¹⁾	0.1814 ⁽²⁵⁹⁾	0.0302 ⁽²⁸⁾	-	
viettelhightech-000	2021-08-04	0.0166 ⁽²⁰⁵⁾	0.011 ⁽²²⁴⁾	0.0198 ⁽²³⁸⁾	0.0167 ⁽²⁰⁵⁾	0.0249 ⁽¹⁵⁹⁾	0.0482 ⁽²²⁷⁾	0.1229 ⁽⁸¹⁾	
vts-000	2020-11-04	0.0174 ⁽²¹¹⁾	0.008 ⁽¹⁸¹⁾	0.0129 ⁽¹⁸⁹⁾	0.025 ⁽²⁴⁹⁾	0.045 ⁽²¹⁰⁾	0.063 ⁽²⁵⁵⁾	-	

Top 1 Vietnam in FRVT 1:1

(National Institute of Standards and Technology - Face
Recognition Vendor Test)

AI Product

www.icenter.ai



VNPT
Smart Vision



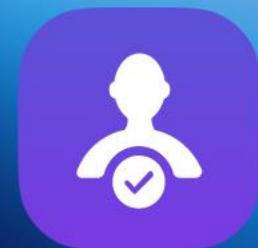
VNPT
SmartBot



VNPT
Smart RPA



VNPT
eKYC



VNPT
Smart Voice



vnFace



VnSocial

