タイにおけるデジタルエコシステムの展望

Yutaka Ueno / NTT Ltd.

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自己紹介

- 上野　裕
- NTT (Thailand) Limited Sales Director

- Working for NTT group over 20 years
- Experience in Thailand, 3 years 10 months
- Background:
  - 20 years ago　System & Network presales + ISP OPs (routing and shared infra)
  - 10 years ago　Engineering (both Pre & Post sales) in J MFG sector
  - 5 yeas ago　Sales focusing to Western FSI and IT Giants
  - Now　Sales in Thailand

何を本日カバーするのか？

タイへ投資・進出を検討されている皆様からデジタルエコシステム観点でITインフラ屋であるNTTに対して、よく質問される事をまとめてお話しします。

- リスク、インフラ（電力、物流等）、人材、関係省庁、政策、コンプラ、どんな事業者がいるのか等
- 最後にNTTの紹介

What you should know?

Risks/リスク – Natural / man made hazard

01. Water flood （水害）

Need to care (十分なケアを）

- Select office at right location
- BCP plan for flood should be established
- If you put server at on-premise, make sure to set up machine room at 2nd floor or higher

例、タイ洪水(2011年)

02. Earthquake （地震）

Bangkok / Eastern area - Limited risk

North / West / South area - **Need to care**

https://earth-planets-space.springeropen.com/articles/10.1186/s40623-016-0465-6/figures/1

http://www.gisthai.org/map-galery/earthquake%208-10-05/Earth%20Quake%208-10-05.jpg

03. Tsunami （津波）

Facing to Gulf of Thai – Limited risk

Facing to Andaman – **Risk exist**

例、スマトラ島沖地震 (2004年)

04. Typhoon（台風）

Minor risk

https://ja.wikipedia.org/wiki/2004%E5%B9%B4%E3%81%AE%E5%8F%B0%E9%A2%A8#/media/%E3%83%95%E3%82%A1%E3%82%A4%E3%83%AB:Muifa_2004_track.png

http://www.gisthai.org/research/muifa/muifa3/muifa3.html

05.Thunderstorm（雷）

Some risk

- Frequent thunderstorm during rainy season.

06. Volcano（火山）

Limited risk

07. Nuclear （原子力）

No nuclear reactor

What about basic resources and infrastructure in Thailand?

To support your ICT needs

Basic resources and infra (基本的なインフラ)

- UPS/発電機等の初期投資、保守計画をしっかりとしておくと後々の問題を減らします。
- 可能ならばDC、クラウドの利用検討を

01. Power 電力 - Need to prepare

Generation（発電）: EGAT / IPP / SPP

Transmission（送電）: EGAT

Distribution:（配電）: MEA for Bangkok Metro Area / PEA for other part of Thailand

Note: IPP may have capacity to sell in some I.E depends availability.

Quality: Expect for occasional short hit.
Most of power outage last less than 10 min.
Outage prolong more than 1 hour is rare.

Counter measure:
Most of commercial building has power generator (shared by tenants)
Some business prefer to set up dedicated generator set to cover their utility load.

From our experience: some IE has more stable power grid compare to Bangkok metro.

Basic resources and infra（基本的なインフラ）

02. Logistic 物流

Road and traffic

- Bangkok metro, Need to expect traffic delay during peak hours.
    - To ease traffic jams, Multiple mass transit is in expected in next decade.
- Outside Bangkok, Nation-wide highway system is well established. Very good road system already in place. Government will be keep investing road system expansion to support Thai and Mekong economy development.

Custom Clearing and Processing

- If it is normal IT hardware, Not see much of delay.
- Heavy machinery (UPS/Generator) may require more processing time

Basic resources and infra （基本的なインフラ）

03. Workforce in Thailand、人材と雇用

- お金を出せば人材は居ます
- 英語を話すエンジニアを日本やシンガポールで雇用するよりも安価
- IT業界のTurn over rate 約20%
- 魅力のある仕事、働く環境の提供

Monthly IT wage in Thailand

Category	Min (USD)	Max (USD)
ERP	1,000.00	7,333.33
Cyber Security	2,166.67	6,666.67
Data Science (BI, AI, Machine Learning)	1,000.00	6,000.00
Infrastructure Network & System	933.33	5,000.00
IT Management & Project Management	1,266.67	5,000.00
Programmer & Developer	833.33	4,500.00
Database Management	933.33	3,500.00
E-Commerce & Digital Marketing	866.67	3,000.00
IT Support	623.33	1,833.33

Source: Brand Inside Asia (August 2019)

Government department and agency

Government

Several government department and arms related to ICT

Ministry of Digital Economy and Society (MDES, 旧MICT))

National Broadcasting and Telecommunications Commission (NBTC)

通信免許、周波数帯割当、放送免許などの規制当局

Digital Economy Promotion Agency (DEPA, 旧SIPA)

政策の推進

セキュリティ分野になると他の政府関連省庁が出てきます。
詳しくはBOIの方にお聞きください。

Government initiatives to promote Thai

Many initiatives to support investment for Growth

- EEC (Eastern Economic Corridor)
  - EEC-d (*digital*)
  - EEC-i (*innovation*)

  Note: NTT BKK2 DC is located at one of the EEC Industrial estate and some customer already applied EEC privilege by making system investment and using our co-location.
- SEC (Southern Economic Corridor)
- Thailand 4.0
- Digital Thailand
- 5G Testbed

Regulatory compliance

To plan your ICT needs

Regulatory compliance

Several regulation that IT team should be aware

- CCA（Computer Crime Act)

- PDPA (Personal Data Protection Act)

  Thai version of GDPR タイ版の個人情報保護法

  The act will be in effect from Jun 2021

  waiting for details of the regulation announcement

Overall ICT market & player

To support your ICT needs

Overall ICT spending in Thailand

IT spending in Thailand and forecast

“Global research firm Gartner has cut Thailand's 2020 IT spending forecast to 649 billion baht, a drop of 9.3% from last year, with the biggest fall predicted in the device segment because of the pandemic.”

Source: Bangkok Post 15 MAY 2020

Covid-19で一時的にITマーケットは縮むが、デジタルシフト
（例、AI、テレワーク、ロボティクス、物流の無人化、キャッシュレス等）は
更に進むと思われる。

Even some impact by Covid-19, Digital transformation will not stop.
Transformation will be accelerated.

Overall ICT market & Player

Telecom market

Many providers are offering service in Thailand
Need to select provider based on coverage and service quality

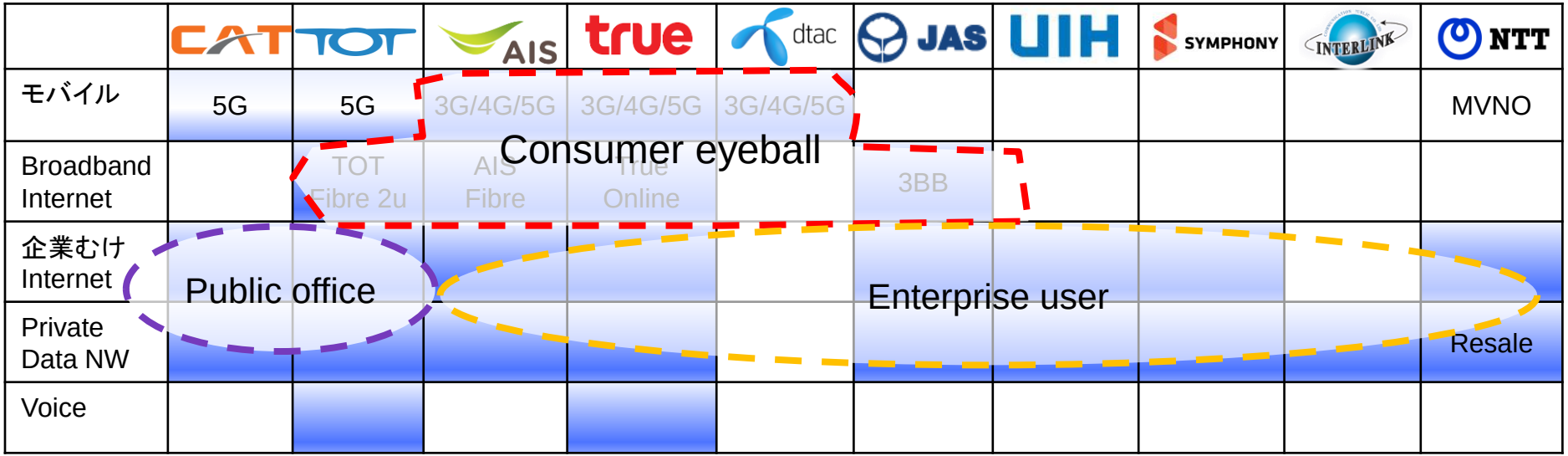
	CAT	TOT	AIS	true	dtac	JAS	UIH	SYMPHONY	INTERLINK	NTT
モバイル	5G	5G	3G/4G/5G	3G/4G/5G	3G/4G/5G					MVNO
Broadband Internet		TOT Fibre 2u	AIS Fibre	True Online		3BB				
企業むけ Internet										
Private Data NW										Resale
Voice										

様々なキャリアがタイ国内におり、サービスカバーレッジや品質で選択する必要があります。

Overall ICT market & Player

Telecom market

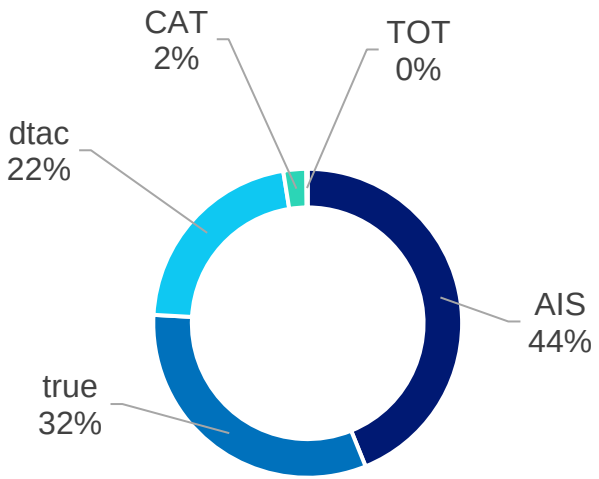
Many providers are offering service in Thailand
Need to select provider based on coverage and service quality



例えば、ビジネス形態（B2C,B2G,B2EDU,B2B）でどことの接続性が重要かは変ってくる。

Overall ICT market & Player

Mobile market share (4Q 2019)



2020Q1 AIS ARPU
Postpaid 525THB/month (1780円程度)
Prepaid 162THB/month (550円程度)

モバイル主要3社の契約者数（1Q 2020 単位：百万）

	AIS	true	dtac	3社計
Postpaid	9.14	8.61	6.16	23.90
Prepaid	32.02	21.67	13.47	67.16
Sum	41.16	30.28	19.63	91.06

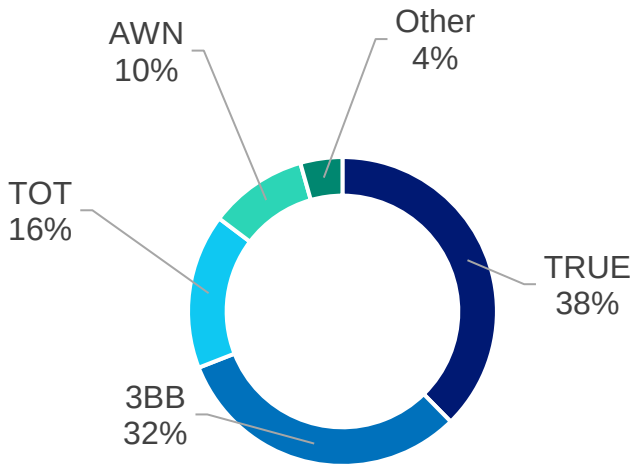
モバイル普及率 130%超

Source:

NBTC รายงานสภาพตลาดโทรคมนาคม ประจำไตรมาสที่ 4 ปี 2562
1Q20 MD&A Advanced Info Service Plc
1Q20 MD&A True Corporation PLC
1Q20 MD&A dtac

Overall ICT market & Player

Internet service Broadband share (4Q 2019)



2020Q1 True Online ARPU
533 THB/Month (1800円程度）

ブローバンドサービス契約数
2019 Q4 – 1010万契約

世帯普及率 46.8%

Source:
NBTC รายงานสภาพตลาดโทรคมนาคม ประจำไตรมาสที่ 4 ปี 2562
1Q20 MD&A True Corporation PLC

Overall ICT market & Player

Data Center market

- Many players in Thailand
- Recent DC are Tier 3 or above
- Recommend to select DC from
  - Location
  - Connectivity
  - Operations excellence
  - Expandability

Overall ICT market & Player

Cloud market

- まだBig boys (AWS, Azure, GCP, Alicloud)はタイに来ていない。

- 以下の 3つの利用モデルが組み合わさったハイブリットユーズが多い
  1. シンガポール　AWS、Azure、GCP、AliCloudの利用
     - タイにはたくさんのパートナいるので、見極め要。
     - シンガポールへの接続性が良いネットワーク構築が肝。
       - SDWANやDirect connect接続など

  2. データの保管場所と通信遅延を気にするお客様はタイ国内のクラウド利用。
     - iNet、Huawei、AIS、NTT等

  3. プライベートなクラウド基盤の構築

時事ネタ

過去一年の主だった動き

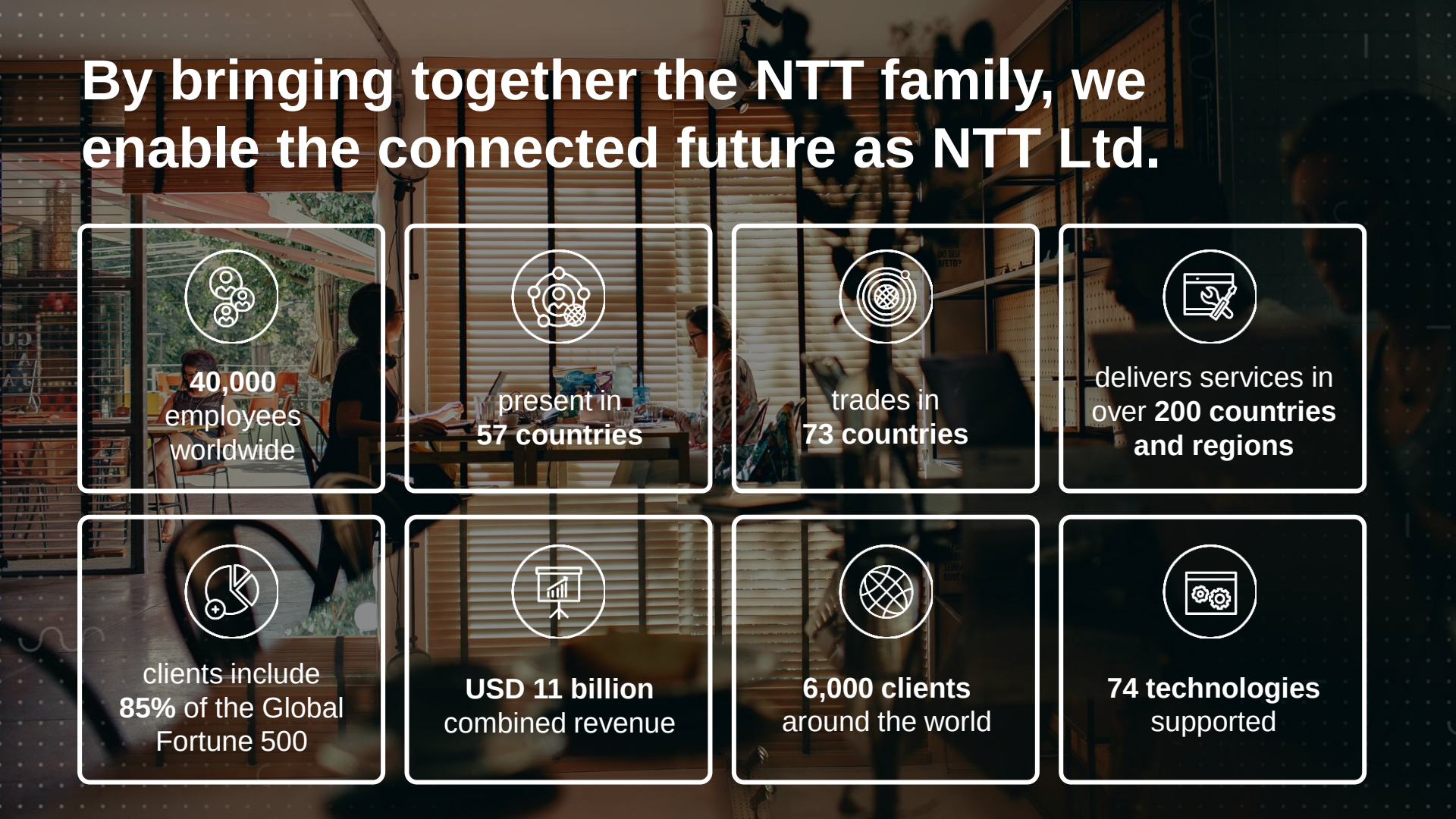
- PDPA
- 5Gライセンス入札、トライアル、サービス開始
- CAT/TOTの合併
- 架空通信ケーブルの地中化、地下埋設工事
- タイ版のデータセンタ標準 （Uptime tier認証に近い物）

Quick update on NTT

How we've come together

Largest integration in the ICT sector in **2019**

By bringing together the NTT family, we enable the connected future as NTT Ltd.



40,000 employees worldwide

present in **57 countries**

trades in **73 countries**

delivers services in over **200 countries and regions**

clients include **85%** of the Global Fortune 500

USD 11 billion combined revenue

6,000 clients around the world

74 technologies supported

Head office locate in Business central zone

62 Years Track Record in Thailand

2 Data Centers with NTT cloud in Thailand

15 Support Centers

More than 40 IT partners in Thailand

NTT THAILAND

- Bangkok
- Chonburi
- Ayuttaya
- Cambodia
- Myanmar
- Laos

How we help you

transform

Working with organizations around the world, we achieve business outcomes through intelligent technology solutions

For us, intelligent means...

- data driven
- connected
- digital
- secure

What we do

We deliver intelligent technology solutions for your business

Client conversations

Enabling a connected future

Customer experience | Digital transformation | Employee experience

Disrupt and transform your future through
Innovation

Our integrated solutions

Consulting Services

Support Services

Technical Services

Accelerate innovation with **Intelligent Digital Transformation**

Create powerful connections with **Intelligent Customer Experience**

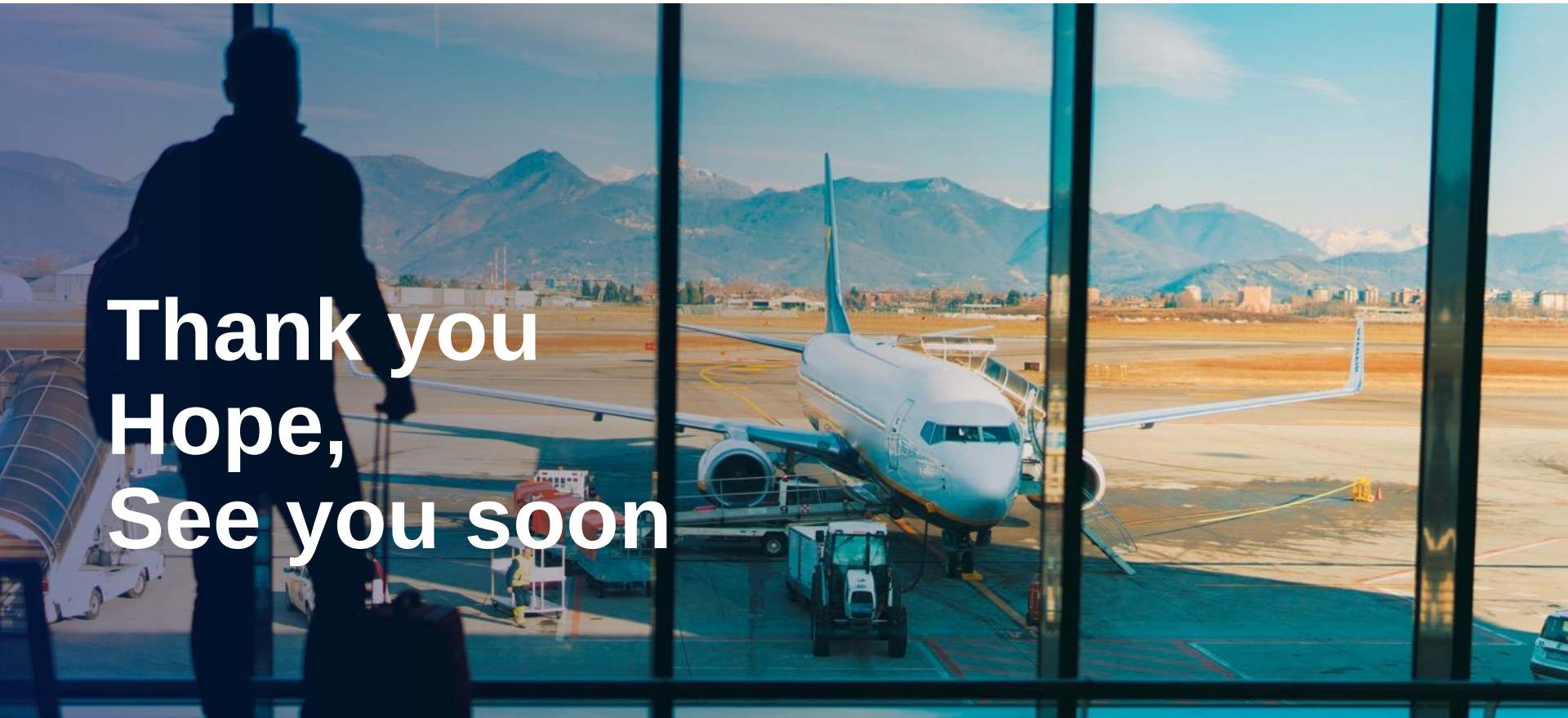
Enhance employee experience with **Intelligent Workplace**

Optimize applications and infrastructure with **Intelligent Data Center and Hybrid Cloud**

Drive business agility with **Intelligent Networking**

Secure by design with **Intelligent Cybersecurity**

Managed Services


Thank you
Hope,
See you soon