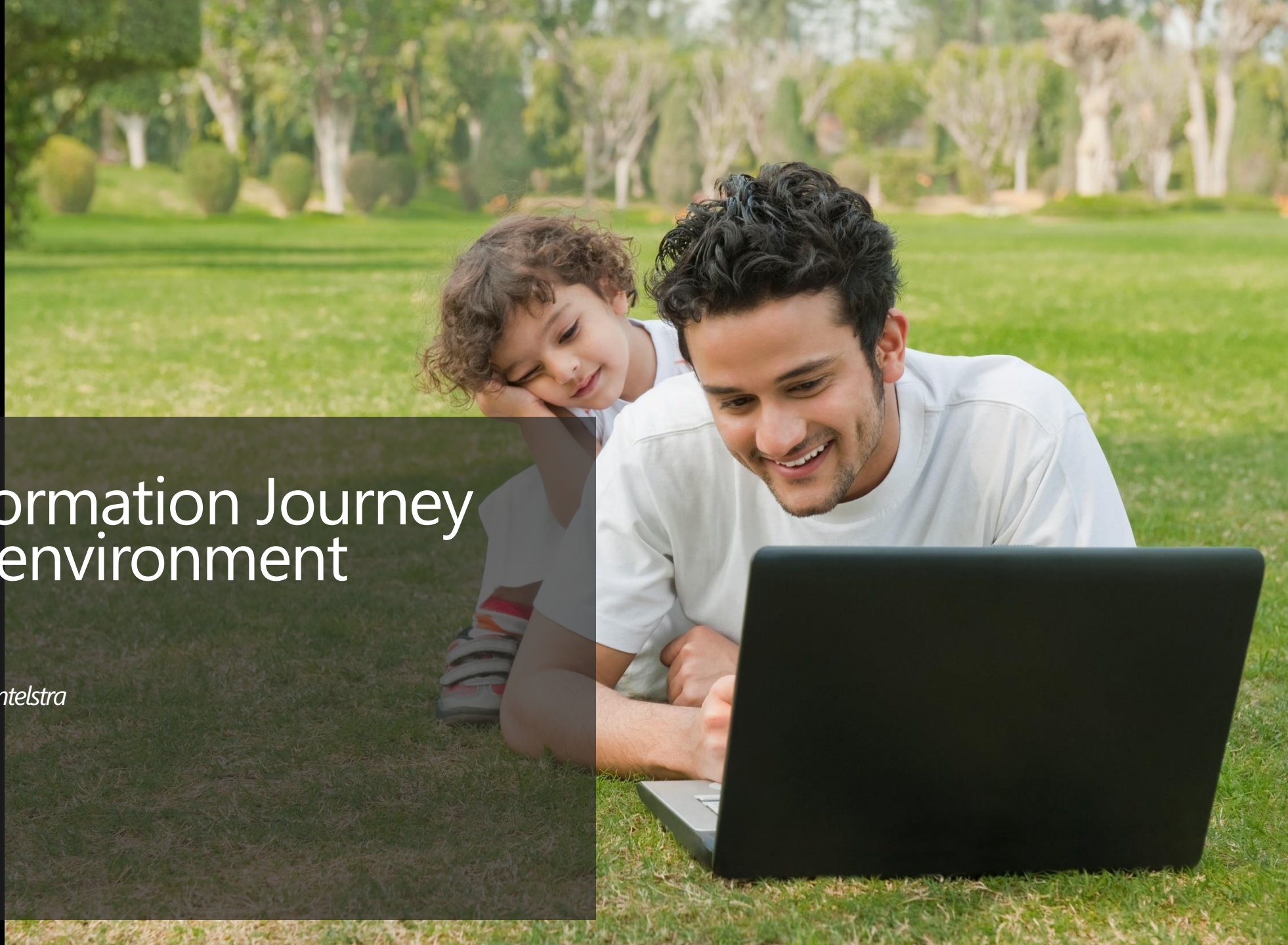


Accelerating Digital Transformation Journey in the hybrid environment

By, Agus F. Abdillah
Chief Product & Synergy Officer Telkomtelstra

Yogyakarta, 15 May 2018

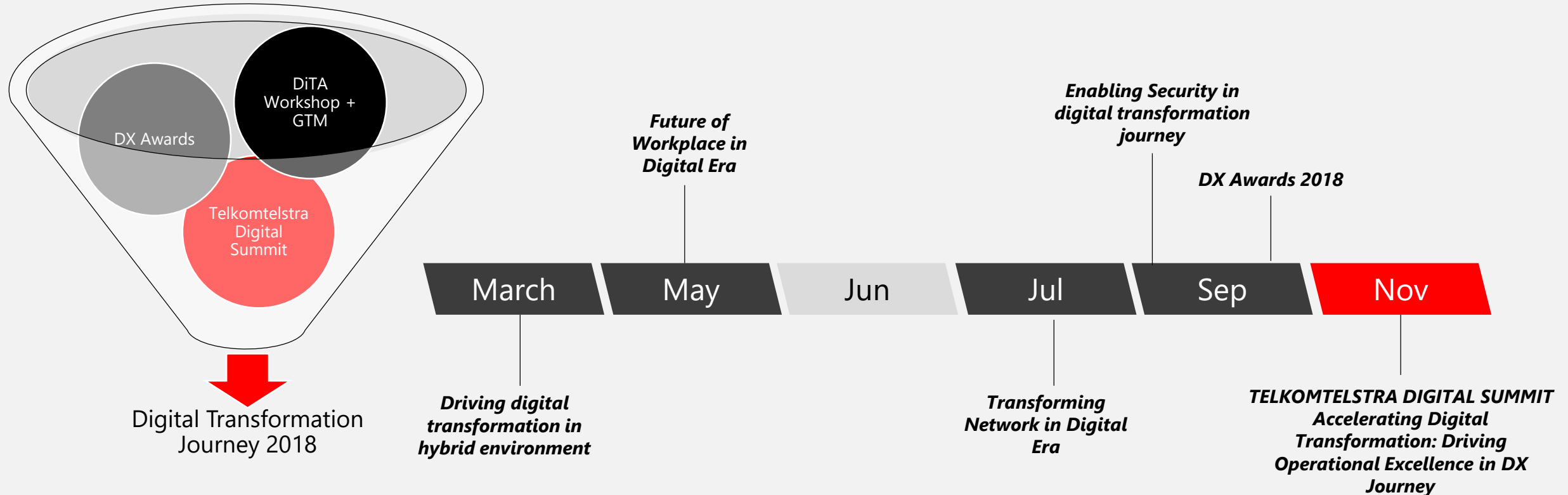


- Digital Technology become driver of disruption which bring new business model and disrupt many industries.
- Digital transformation is a must for any companies or organization to exist and it is a journey.
- Cloud become the driver and its adoption is fast becoming a new trend across the industries. Although it has existed for years before.



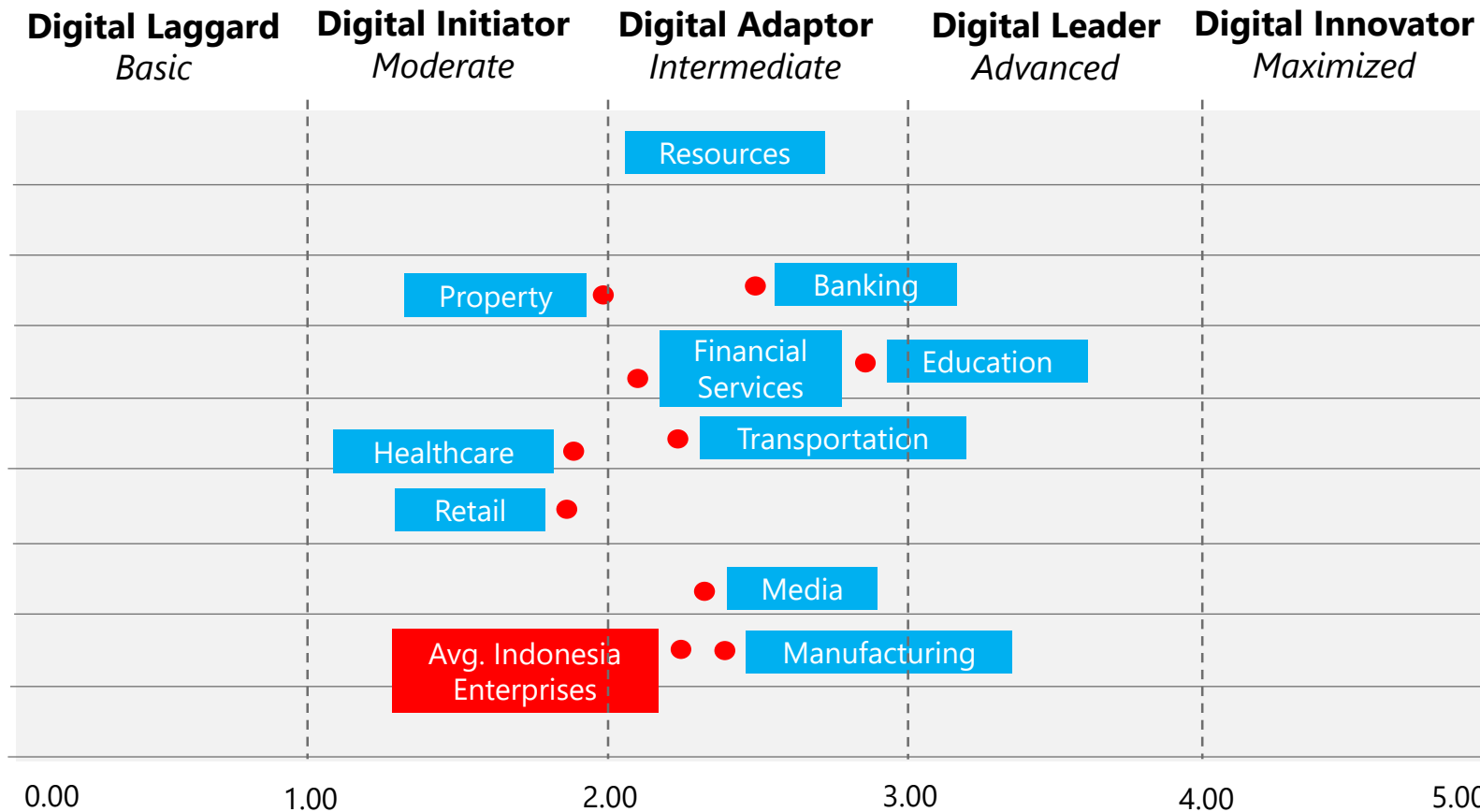
Telkomtelstra Digital Transformation Program

Digital Transformation (DiTA) is an annual continuous program designed for helping customer provide insight a transformational journey within their organization.



Last year (2017) we successfully invited more than 100+ participants from 80 companies to attend series of Digital Transformation workshop. This year (2018) we have 4 series and a Telkomtelstra Digital Summit, and planned to invite more participants than last year.

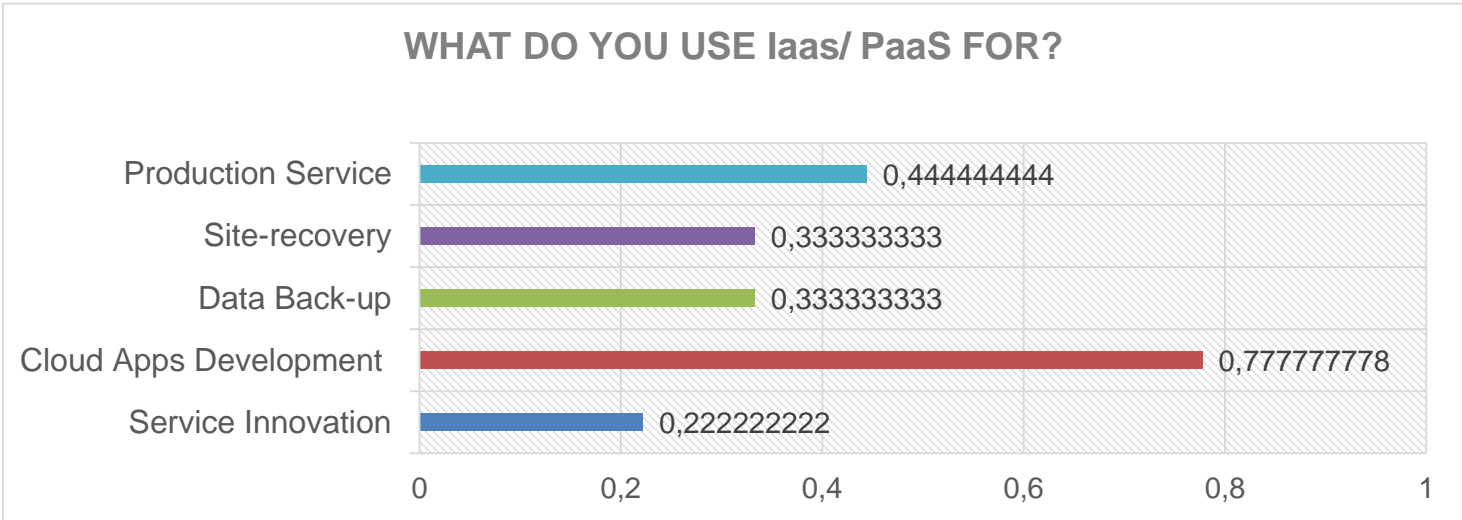
Digital Readiness Assessment by Vertical Industry



In average, Indonesia's enterprise are in intermediate stage where organizations are already aware and looking for adoption to digital environment through the consistency of using emerging technology

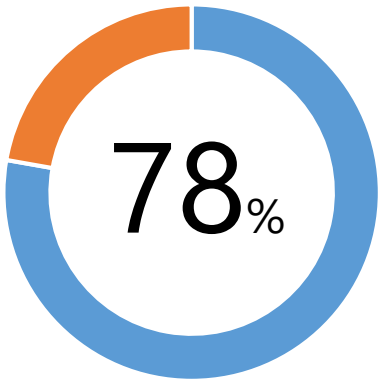
Cloud Survey: for IaaS

What DiTA attendees say about IaaS



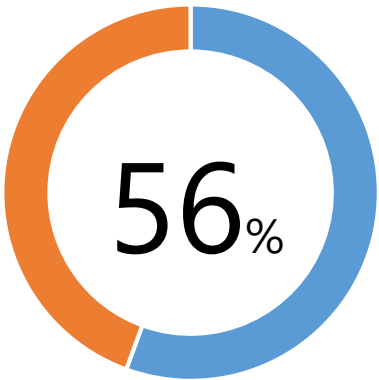
Majority respondents uses IaaS/PaaS for Cloud Apps Development. Surprisingly, IaaS/PaaS are also used as Production Service environment.

Chart Title



Most of them are using IaaS/PaaS recently.

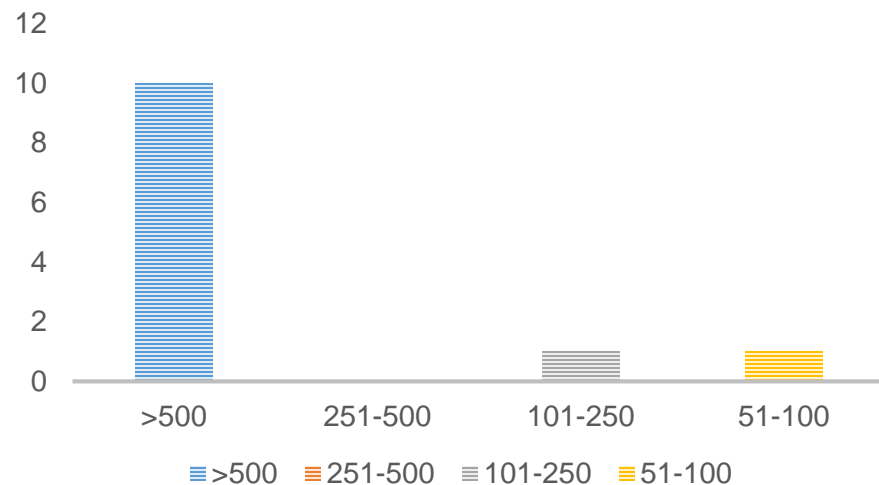
Chart Title



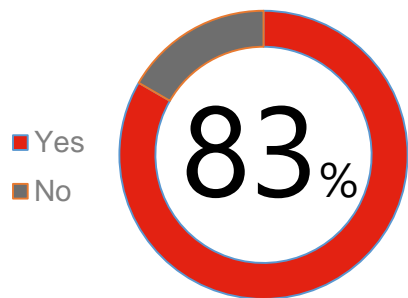
Cloud Survey: for SaaS

What DiTA attendees say about SaaS

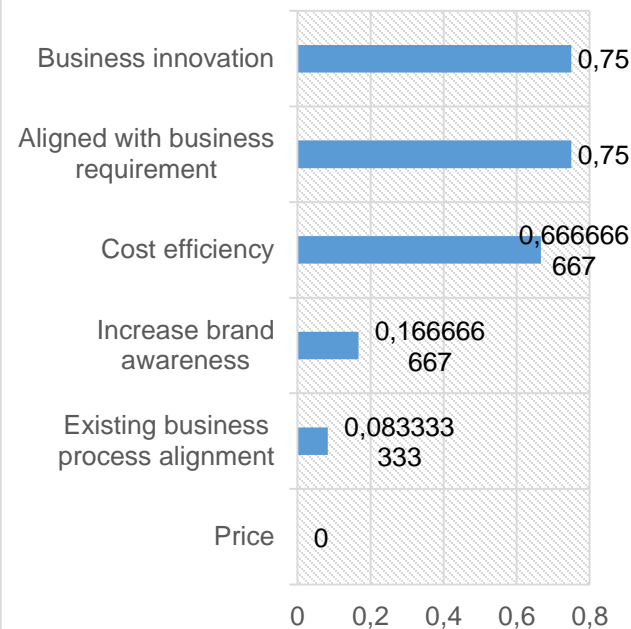
Company Size by number of employees



ARE THEY USING SaaS NOW?

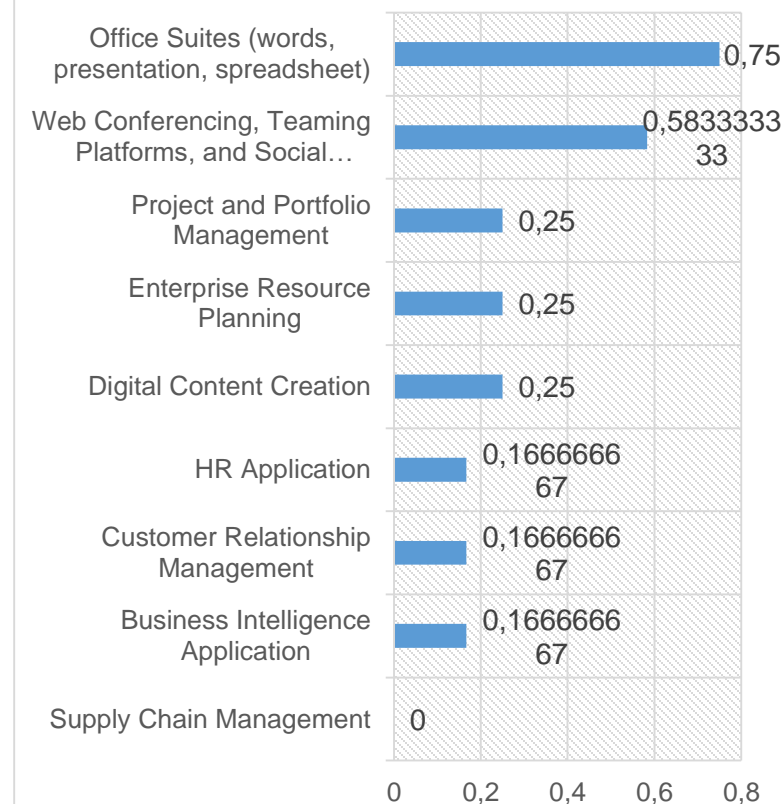


WHAT ARE THE KEY DRIVERS FOR YOUR COMPANY TO USE SaaS?



Business innovation and alignment with business requirement are the top key drivers for company to use SaaS

WHAT KIND of SaaS PRODUCTS THAT YOUR COMPANY USE/ WANT?



Telkomtelstra Digital Transformation Framework

ECE – Engaging Customer Experience and strengthen relationship.

ECE

API

API – Apps Programming Interface to connect and scale to ecosystem.

IDA

IoT

IoT – Intelligent of Things to sensors/ monitor by connecting things surround you.

ITO

IDA – Intelligent Data Analytics to decide by creating smart intelligent model.

ITO – IT operation to Operate Automate and Build Digital Operation Center

Industries

BFSI

Manufacturing

Resources

Retail

Government

Education

ECE

- Dynamic 365
- App Service

ECE

- Cortana
- AI Solution
- Dynamic 365

ECE

- Dynamic 365
- App Service

ECE

- Web Apps
- Azure Media Service

ECE

- Web Apps
- Mobile Apps
- Cloud Service

ECE

- Web Apps
- Cloud Service
- Azure Media Service

IoT

- IoT Hub
- Data Lake Storage

IoT

- IoT Suite
- IoT Hub
- Windows IoT

IoT

- IoT Suite
- IoT Hub
- Stream Analytics

IoT

- IoT Hub
- IoT Edge
- Data Lake Storage

IoT

- IoT Hub
- IoT Edge
- Stream Analytics

IoT

- IoT Hub
- IoT Edge
- Stream Analytics

IDA

- Power BI
- SQL Database

IDA

- SQL server database
- Power BI

IDA

- Machine Learning
- Cloud Service

IDA

- Machine Learning
- Bot service
- Power BI

IDA

- Data Lake Analytics
- Machine Learning

IDA

- Power BI
- Machine Learning
- SQL Database

ITO

- Office 365
- Active Directory

ITO

- Office 365
- DevTest Apps
- Visual Studio

ITO

- Active Directory
- Visual Studio
- Logic Apps

ITO

- Office 365
- SQL Database
- DDoS Protection

ITO

- Office 365
- Security Center
- SQL Database

ITO

- Office 365
- Active Directory

API

- Notification Hubs
- API Management

API

- API management
- Computer Vision API

API

- API Management
- Face API

API

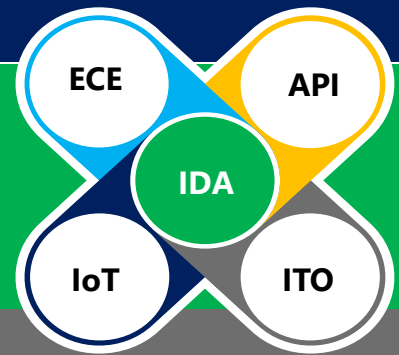
- API Management
- Cloud Service
- Loct Based Service

API

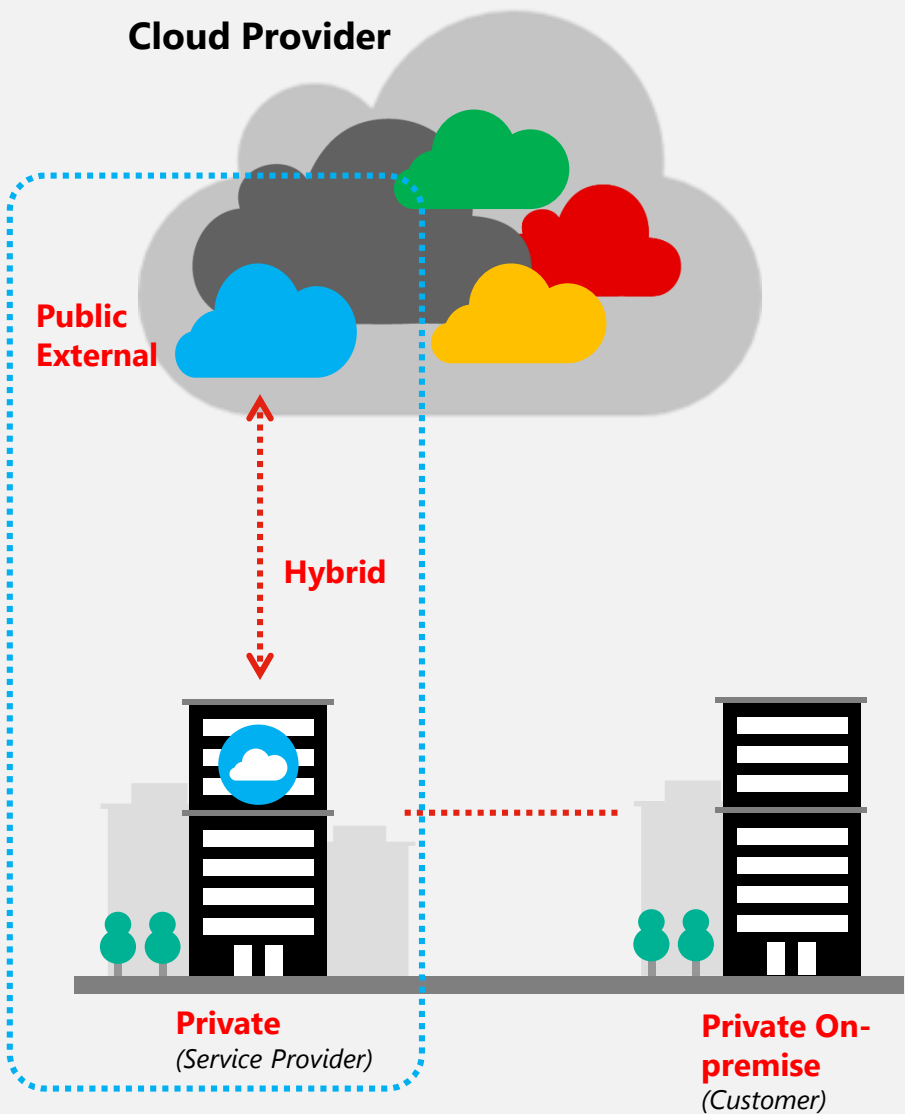
- API Management
- Azure Location Based Services

API

- API Management
- Face API



Cloud Deployment Model



public

Cost



Service & infrastructure provided publicly for multiple client. Most economical solution, but security and compliance concerns.



Share infrastructure across different users



Inexpensive and easy to setup



private

Control



The hosting infrastructure is provided exclusively for one customer (either locally or at an external provider). Most expensive solution for security requirements.



Does not share infrastructure



Mission critical workload, security, uptime, etc



hybrid

Both



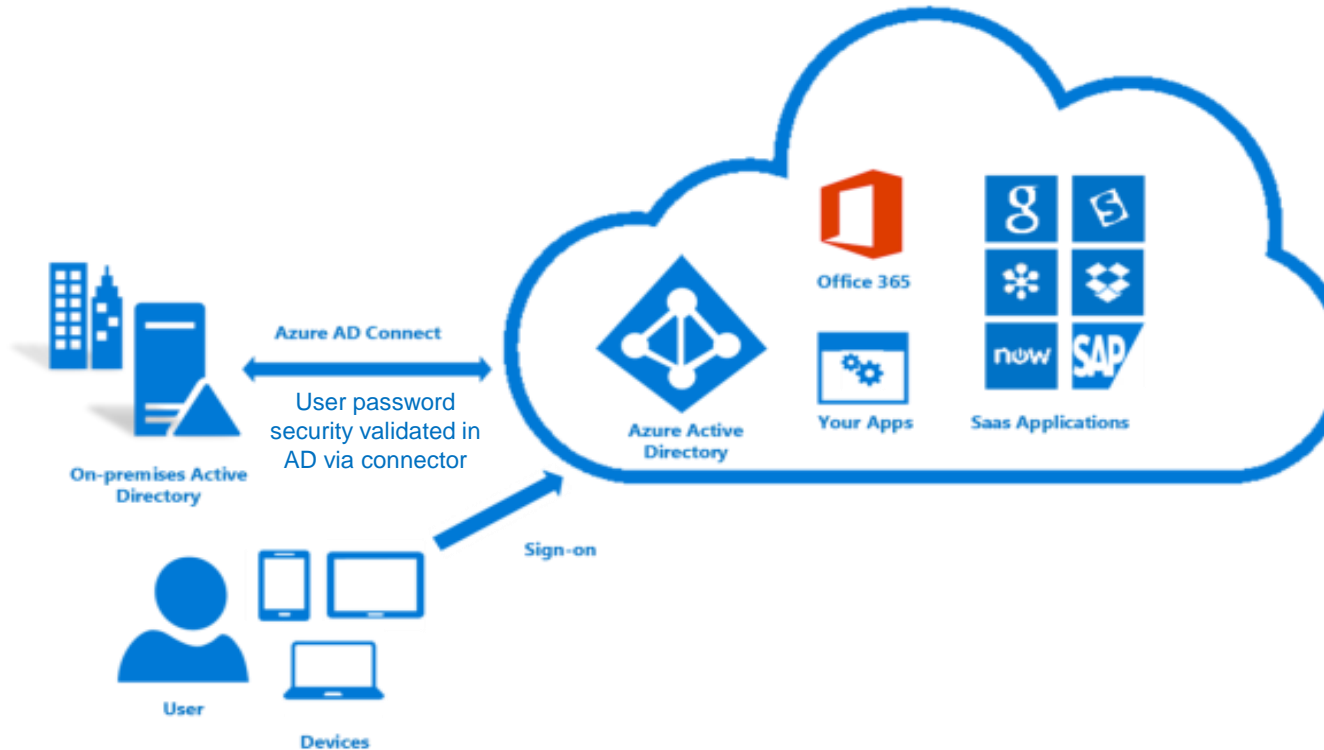
Customized combination of private and public cloud services. Most flexible system, but difficult to implement.



Data residence based on classification



Dynamic and highly changeable workload



Challenges

- ID Synchronize with all university apps: Office 365, WiFi, library, student data, campus portal, etc.
- Placing AD on-premise for security matter

Solution

- Hybrid Identity solution
- Identity of all university apps

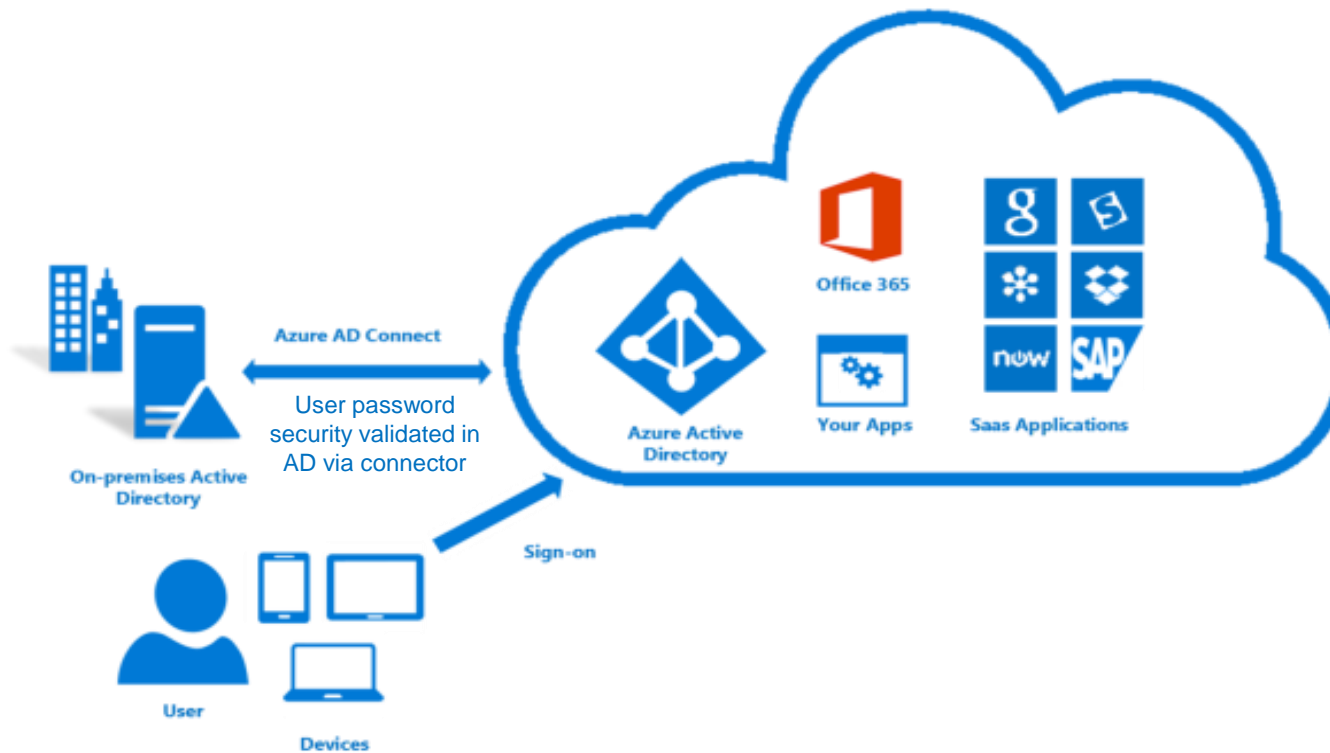
Products & services

- VDI
- Azure Active Directory
- Azure AD connect
- Office 365

Benefits

- Decrease un-sync between to resource (on-premise & cloud)
- Focus & managed only single Active Directory
- Sync students & teacher ID into single ID

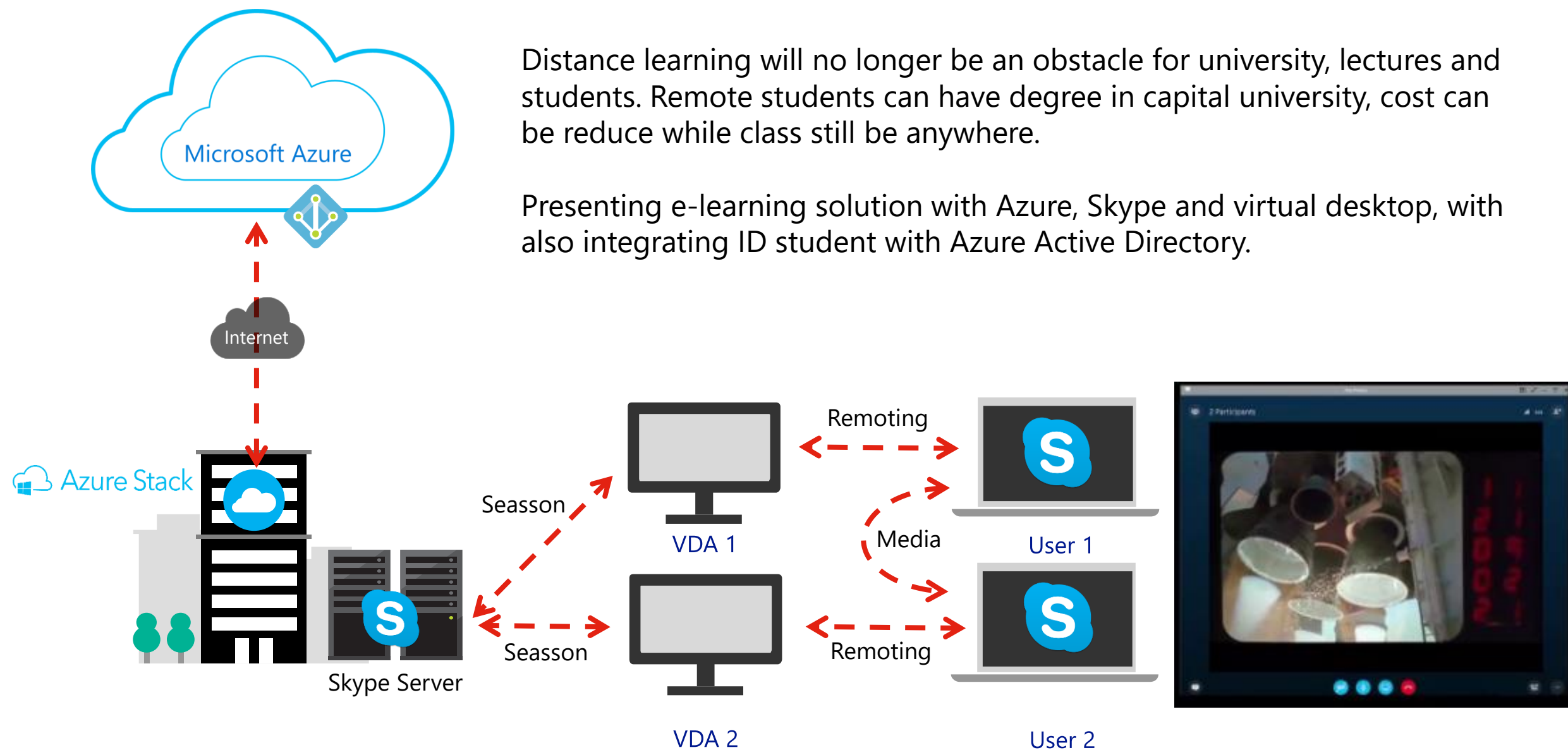
Education : Student Single Identity



Build single ID of all student and teacher with Azure AD (Active Directory) to all campus apps such as: Office 365, Wi-Fi access, library, campus portal, student data, etc.

By connecting the AD both on-prime and cloud, automatically sync all the apps that managed by campus to deliver hybrid indentity solution

Education : e-Learning



MICROSOFT DYNAMICS 365

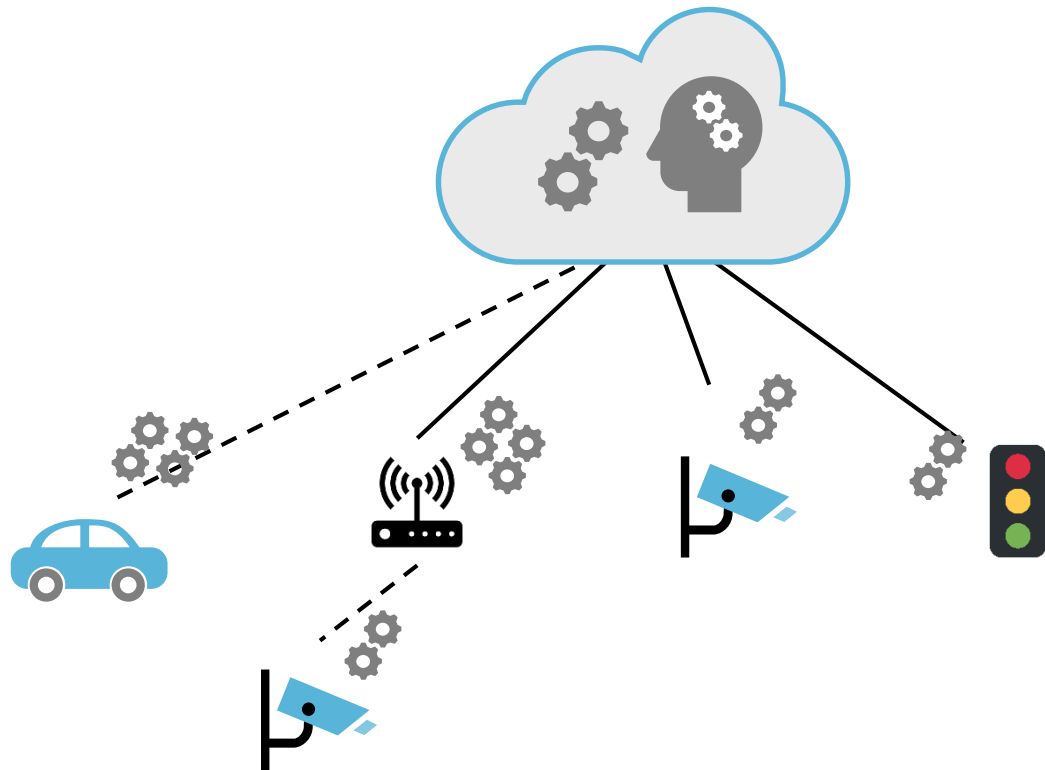


With Dynamic 365 on top of Azure, university can create one-stop shop for international and domestic recruitment.

Connect to international agent in recruiting foreign student to review university admission criteria and fill out simplified application forms while also eliminating traditional process by email which take weeks to completed.

On domestic, university can track to graduading high school student database to connect to their historical data in minutes.





Challenges

- Handling city traffic and citizen safety
- Utilize city devices : CCTV, Wifi, traffic light, cars, etc.
- Public information of traffic

Solution

- Traffic Management Controller
- Citizen Traffic Viewer

Products & services

- | | | |
|----------------|-----------------------|--------------|
| • App services | • Data Lake Analytics | • Storage |
| • IoT Hub | • Stream Analytics | • Event Hubs |
| • IoT Edge | • Machine Learning | |

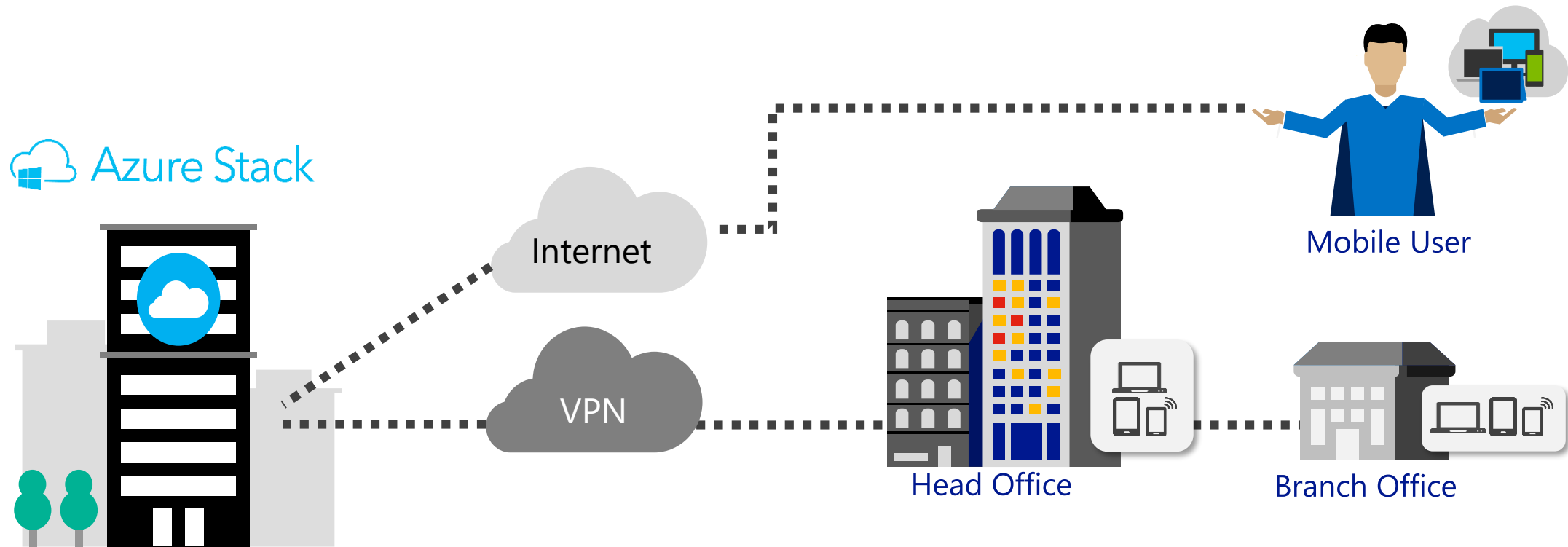
Benefits

- Departement of Transportation can easily managed & control city traffic & safety
- Citizen have access to view city traffic

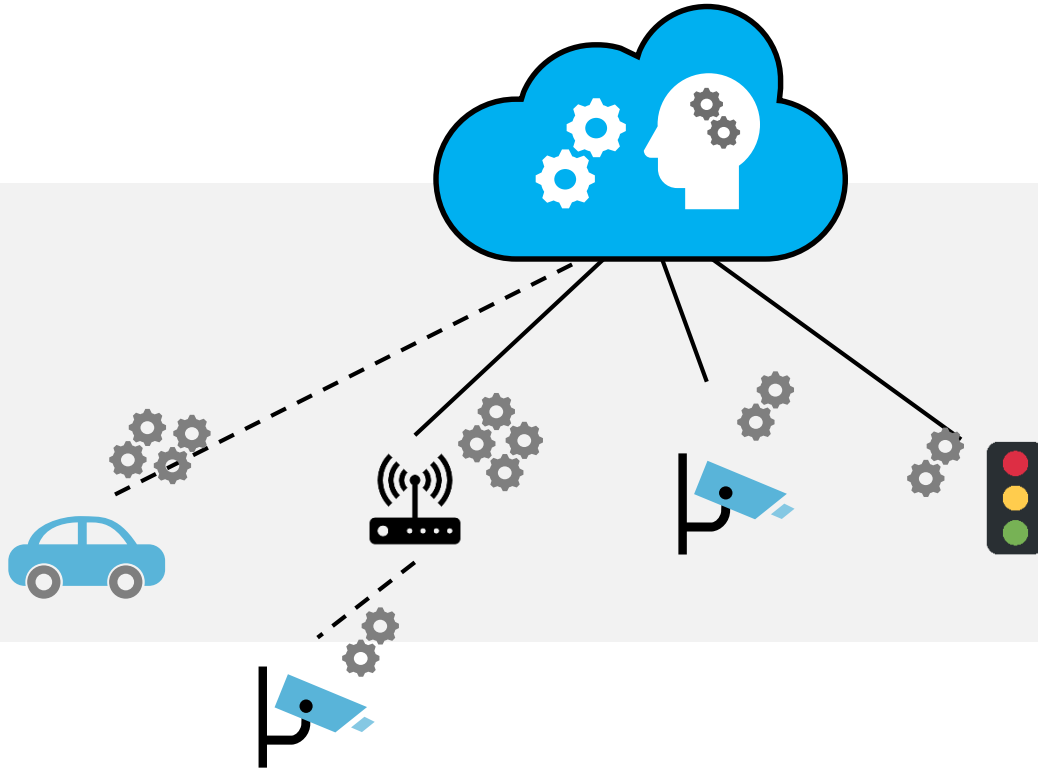
Government : E-Notadinas

E-Notadinas is an office collaboration application for formal letter by shifting paper-based from drafting, approving, and distributing process without changing the business process.

E-Notadinas is installed on the Telkomtelstra Azure Stack in Indonesia, so data security is guaranteed and government regulation is met



Government : Traffic and Safety Management

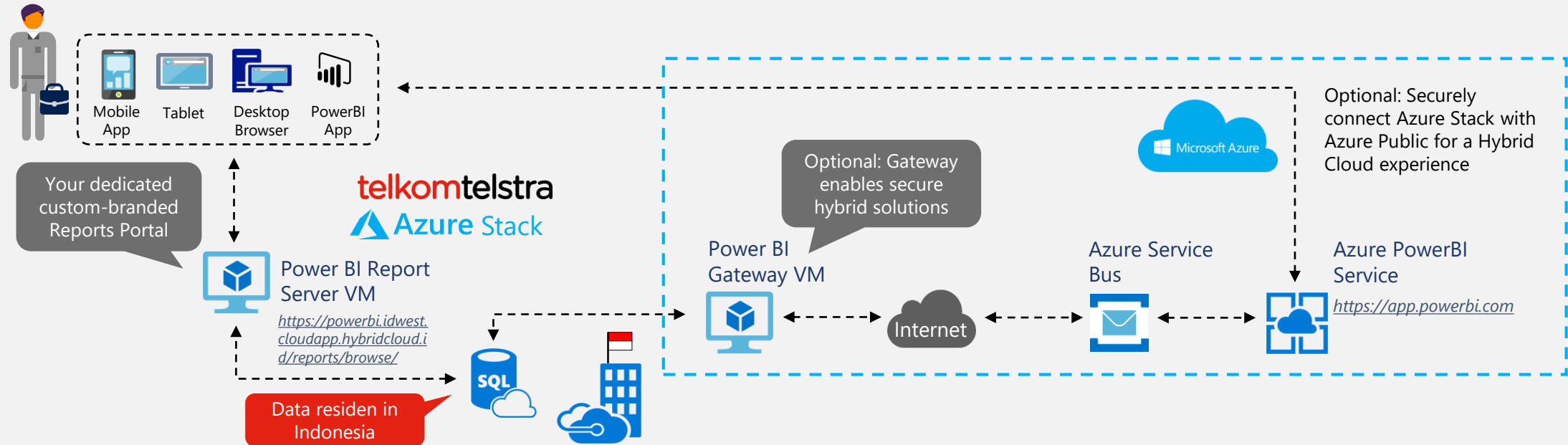


Implementing Smart City is a how to integrating & connecting all 'things' that government have. Traffic and safety is become priority in many cities, by developing traffic management control to Departement of Transportation (Dinas Perhubungan) and also providing traffic viewer to citizen by utilizing city device such as CCTV, Wi-Fi, Traffic Light, Buses, Trains, Cars, and others.

With Azure IoT Solution, the city devices become 'things' as information source and analyzing in Azure Data Base will help to generate real-time information of city traffic. As data collected, it can produce traffic pattern analysis and traffic forecast.

Departement of Transportation can easily managed & control city traffic & safety and Citizen have access to view city traffic.

Government : Business Intelligence with data security



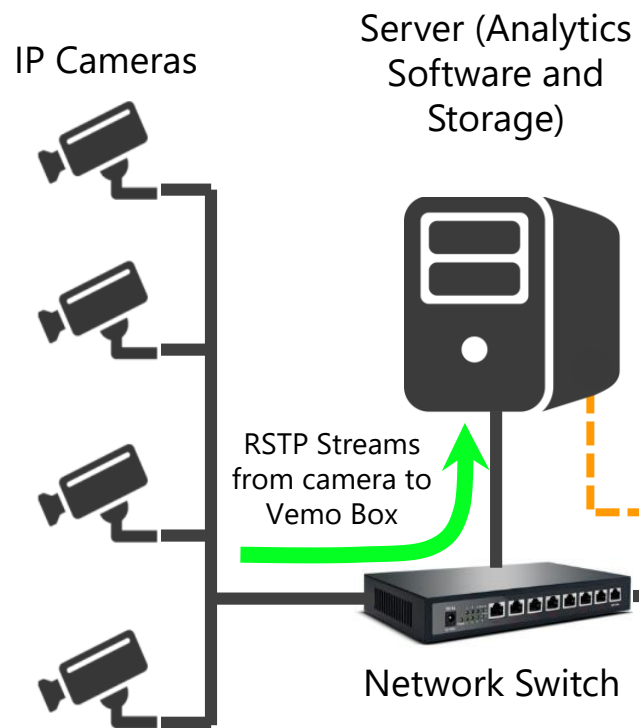
Build advanced data analytics by placing the sensitive data in local DC* and combining others data from internet & cloud, while also delivering with shopisticated business analytics portal.

**comply government regulation PP.82 2012 of data sovereign*

Retail : Video Analytic (hit map)

4 Cameras per-Server

CUSTOMER NETWORK



Metadata sent every 15 minutes to the cloud.



Router



Microsoft Azure

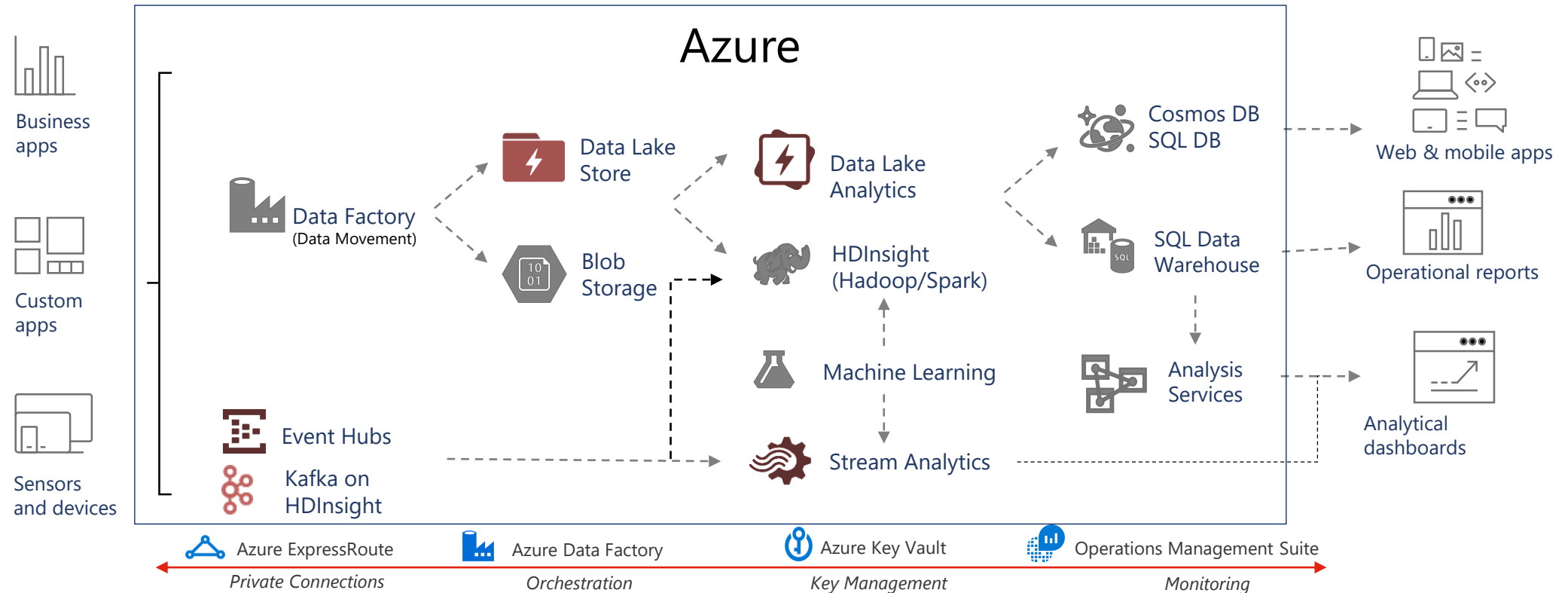


PC/ Laptop



- Shape recognition
- Flame and smoke detection
- Face recognition
- Automatic Number Plate Recognition
- Video tracking
- Motion detection

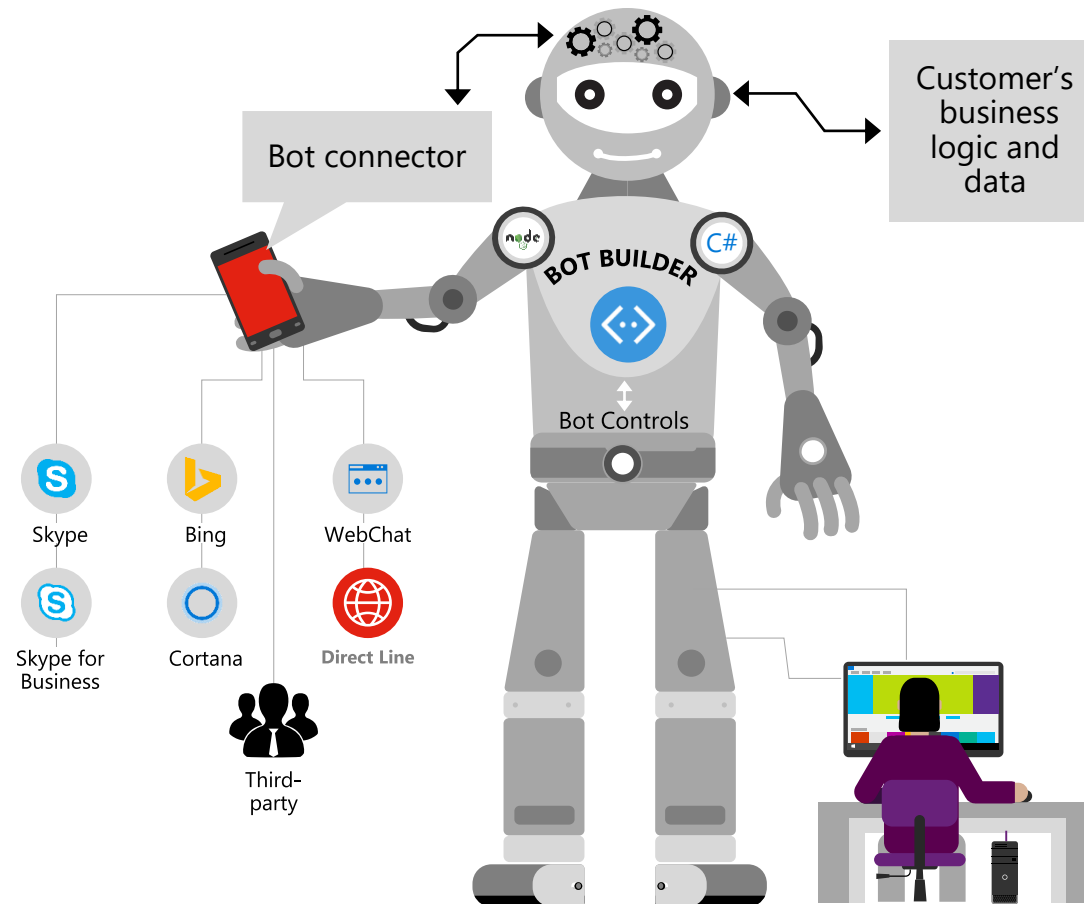
Retail/Commerce : Big Data Analytics



Big Data is how capturing structure and unstructured data to get valuable information. By modernizing data warehouse in order to capture it, organization will get insight to manage the campaign and also gathering instant analysis of social sentiment & customer feedback.

By reducing time in getting customer insight, company have the ability to make changes to campaigns or adjust product rollouts based on real-time customer reactions and personalized experience & promotion to customer.

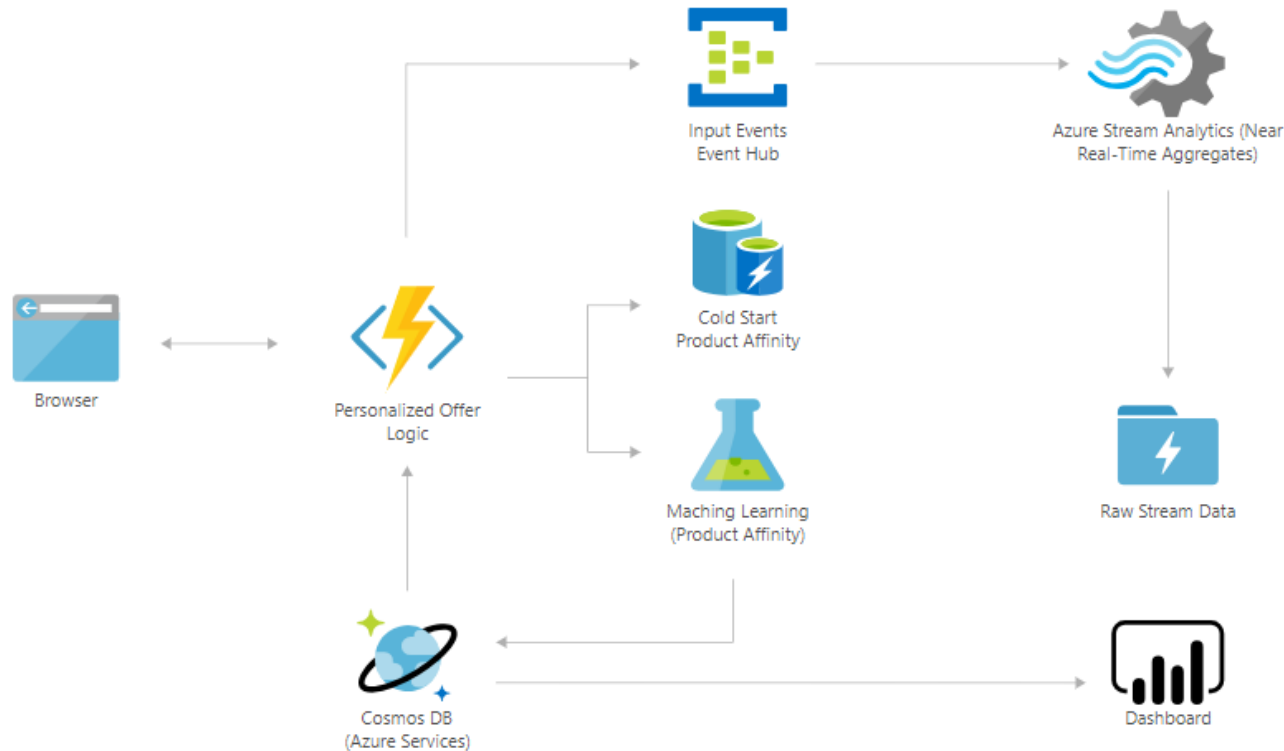
Retail/Commerce : Automated Customer Service



To deliver better experience company start to build automated customer service with bot technology. With Azure bot service, cognitive service able to managed complexity around intelligent controls.

Connecting across multiple user interface such as Skype, Cortana, Bing, WebChat and third party while maintaining standard protocols will advantage user interacting with his/her favourite channel.

Retail/Commerce : Personalized Marketing Solution

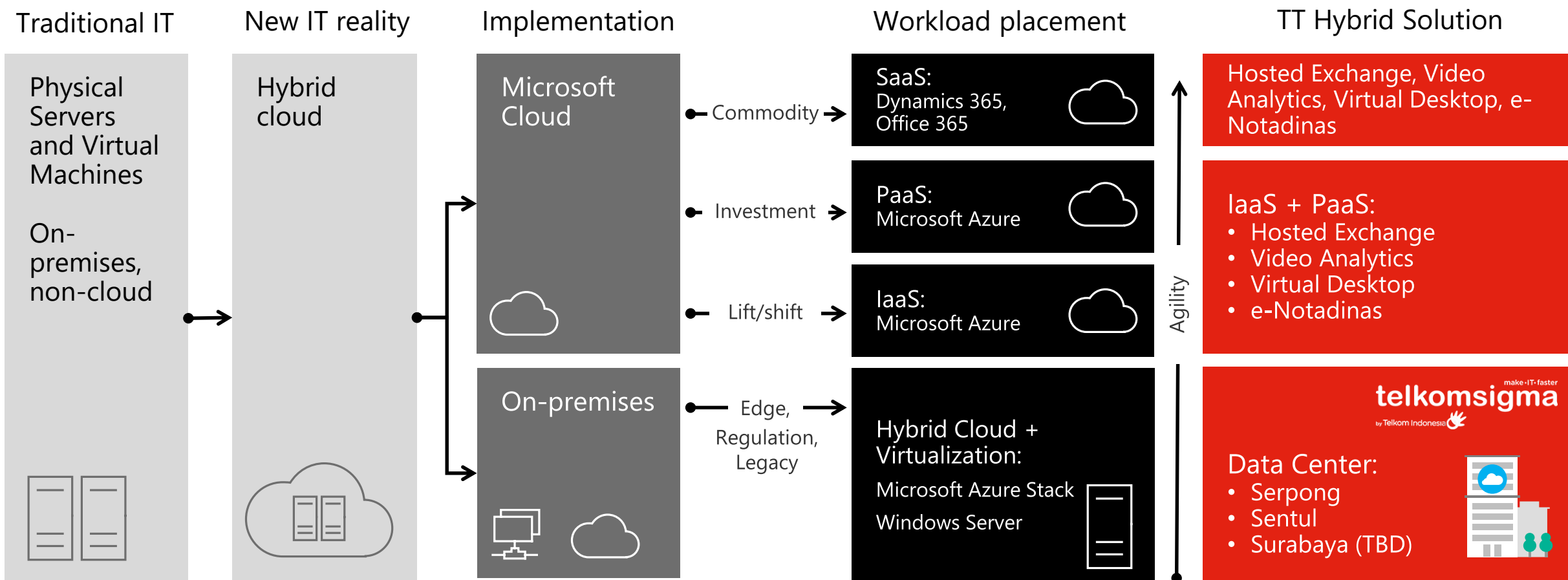


Personalized marketing is essential for building customer loyalty and remaining profitable. Current marketing systems fail to take advantage of data that can help solve this problem.

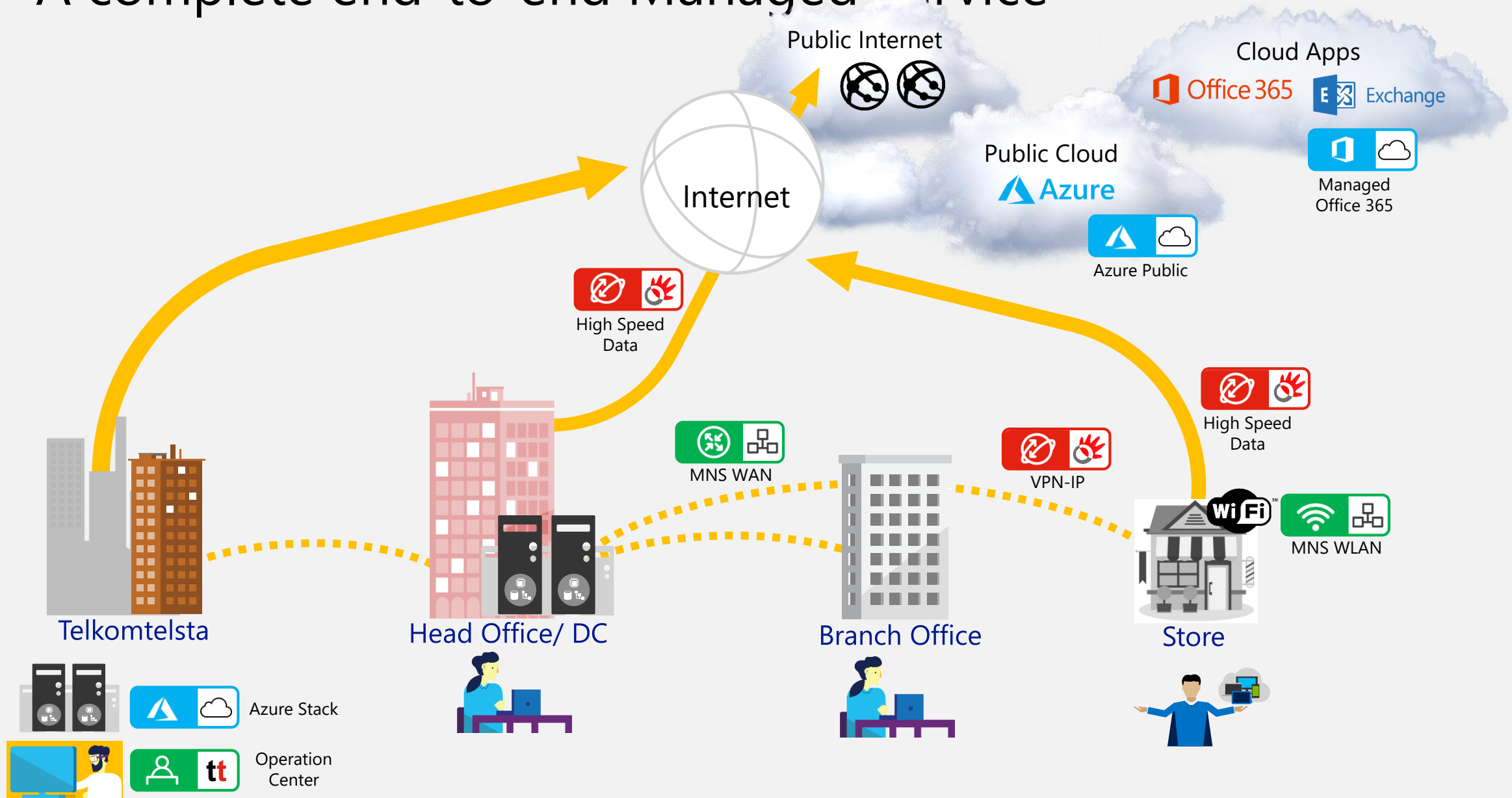
Marketers using intelligent systems and analyzing massive amounts of data can deliver highly relevant and personalized offers to each user, cutting through the clutter and driving engagement. For example, retailers can provide offers and content based on each customer's unique interests and preferences, putting products in front of the people most likely to buy them.

By personalizing your offers, you'll deliver an individualized experience for every current or prospective customer, boosting engagement and improving customer conversion, lifetime value, and retention.

Hybrid Cloud Platform



A complete end-to-end Managed Service



Why Choosing Telkomtelstra Cloud Solution

Powered by Microsoft

Telkomtelstra Cloud Platform powered by Microsoft, leader in cloud technology. Provides a trusted and an innovation driven to support your business

Roadmap on the First True Hybrid Cloud in Indonesia

Telkomtelstra will be the first Cloud Service Provider in Indonesia with a true hybrid cloud technology.

Powerful on Cloud, Stable in Network

Combining network capabilities by TelkomGroup, in order to keep your business stable accessing cloud services.



Combining other Capabilities

Combining and integrating other telkomtelstra services to create better cloud experience, such as business productivity apps, network services, security services and professional services

Reliable and resilient service delivery

Reliability

- 99.5% or greater uptime
- Control over planned maintenance
- Pro-active monitoring



Availability and DR

- Redundancy and resilient design
- Data and process isolation
- Disaster recovery through geo-replication



Supported SLAs

- SLAs achieved through software resiliency
- Financially backed
- Partner and customer support



Empower Your Business With Confidence



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