



JISTOTA MODERNÍ MEDICÍNY



JISTOTA MODERNÍ MEDICÍNY

AI/ML/IoT is changing the world

IoT deployment

Warehouses, fridges and freezers
temperature monitoring





JISTOTA MODERNÍ MEDICÍNY

ABOUT US



6 500 EMPLOYEES



43 DEPARTMENTS



1 700 000
OUTPATIENT
EPISODES



65 000 INPATIENT
EPISODES



9 BIL. KČ

AI is changing the world

Some professions will disappear (Drivers, Lawyers, Accountants)

Some professions will drastically change (RDG)

Faster, more accurate (No longer constrained by the limits of human knowledge)

Use in diagnosis and treatment (Nano)

AI Triage (ADA)

We will have to change legislation, processes

Strategy main pillars

AI / ML / IoT

Standardization in LOB

Cloud First Strategy & SaaS

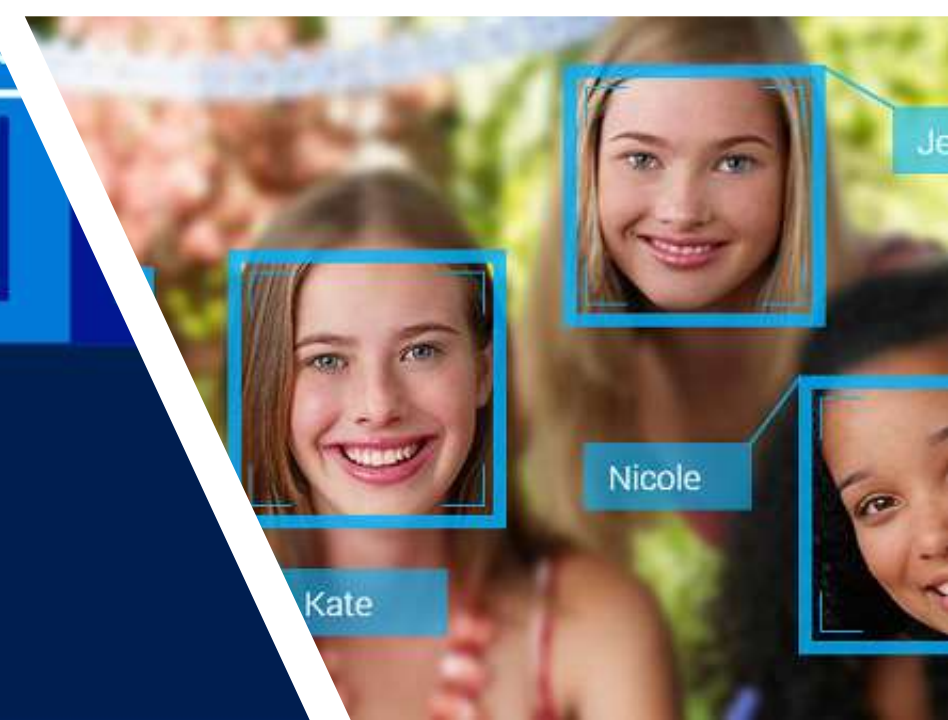
Data Analytics

Security

HR Investment

The Microsoft AI platform: Azure+AI

Cloud-powered AI for every developer



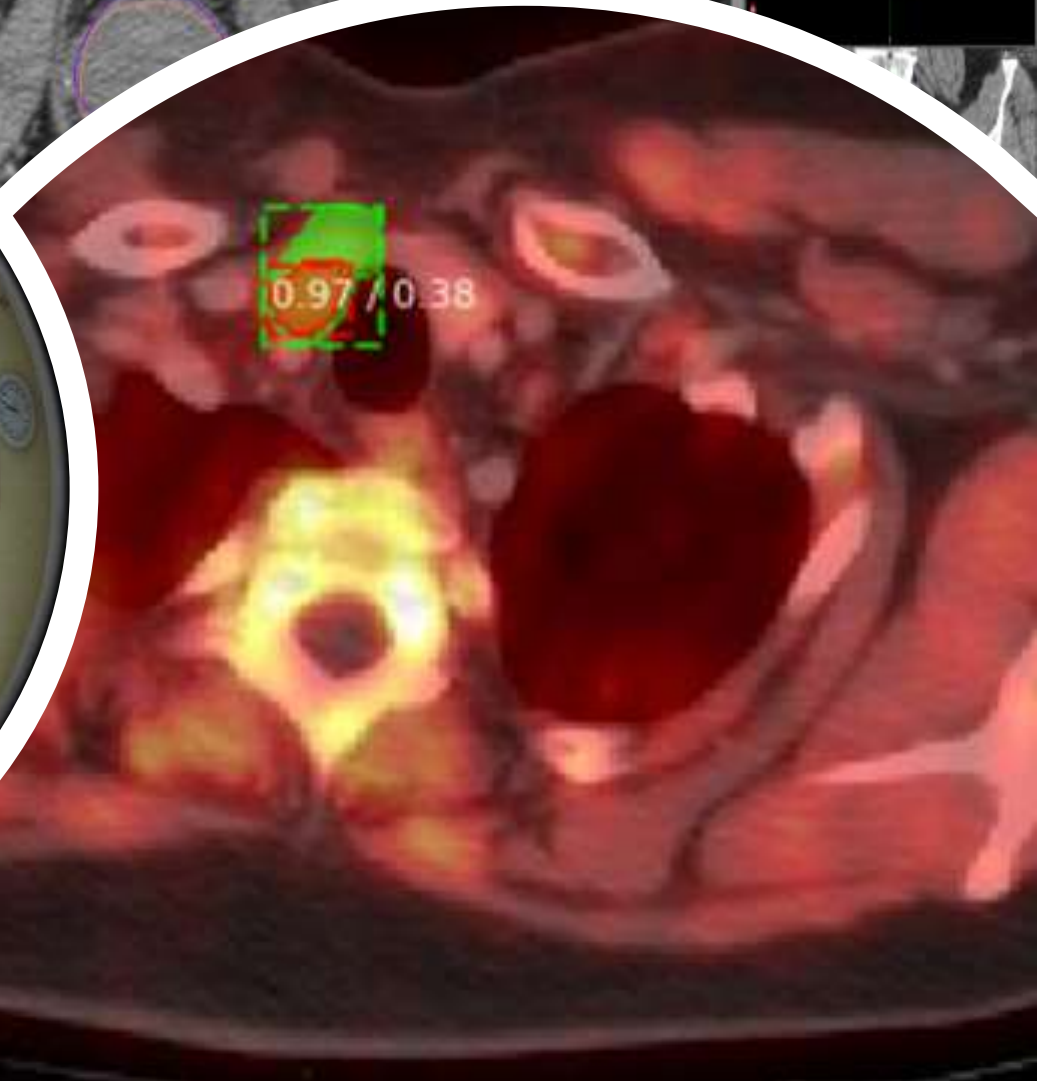
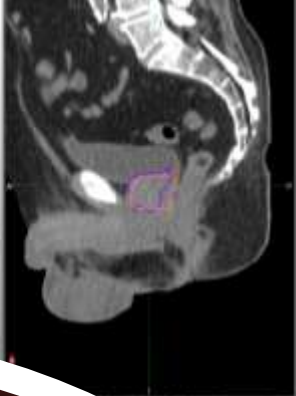
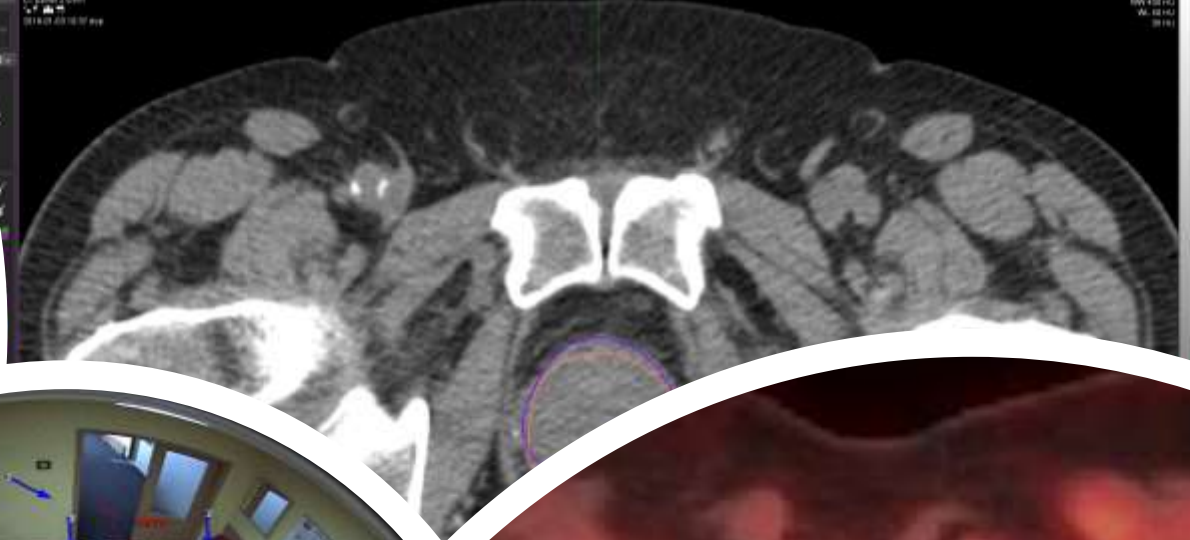


Ahoj, jsem Chatbot VF
jak vám mohu pomoci

Hledání zaměstnanců

Hledání osob dle kliniky

Hledání řídicích dokumentů



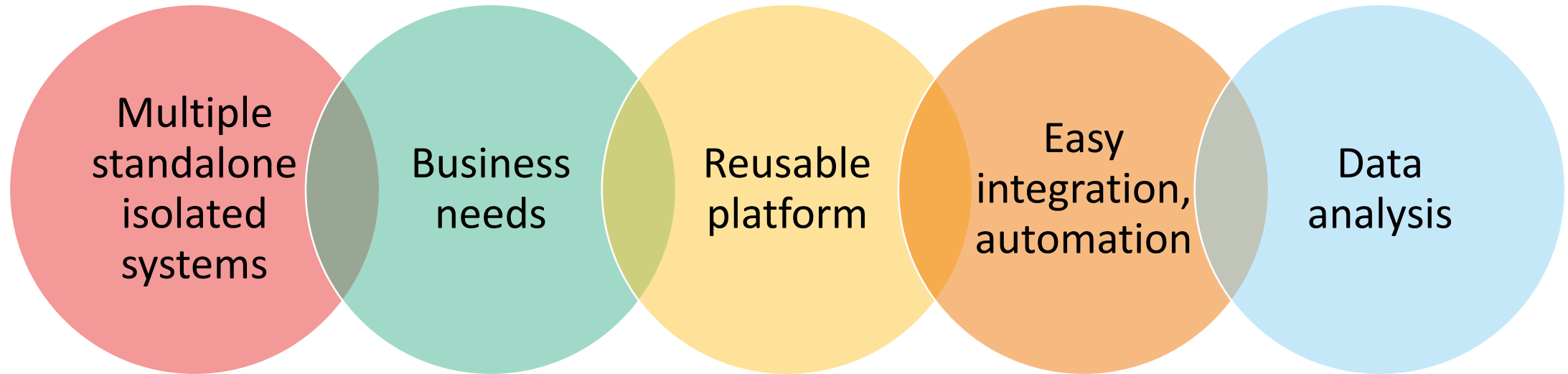


JISTOTA MODERNÍ MEDICÍNY

Internet of Things



WHY IoT?





GOAL OF THE PoC PROJECT

We wanted to setup base IoT platform on simple PoC project using Microsoft Azure IoT platform services for collecting, processing and data visualization



We wanted universal, open solution, prepared for future extension



We wanted that the knowledge will be transferred to the internal staff, so we would be able to maintain and extend solution by ourselves



PROJECT REALIZATION & OUTPUTS

Laboratory chemicals department

- 15 temperature sensors

Nuclear medicine department

- 10 temperature sensor
- 1 power consumption sensor

We are collecting data every 20 minutes using local wireless IQRF network with mesh topology. All communication is AES-128 encrypted. GW's are connected to the cloud using LAN.

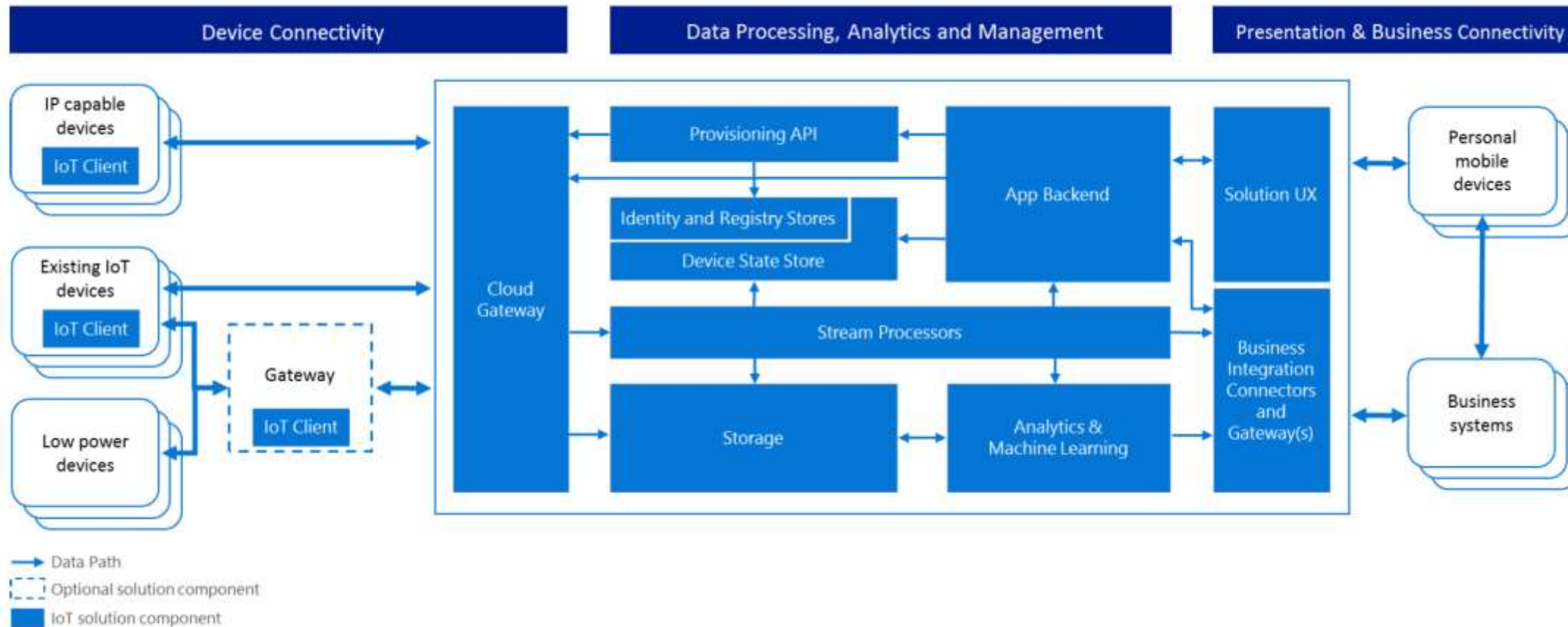
Data are transformed in GW from IQRF DPA protocol to the JSON protocol and sent to Azure using MQTT

We are using Power BI Dashboards as a visualization platform (VFN standard)

We are using e-mail notifications in case of any out of range values



IoT – SOLUTION ARCHITECTURE







DASHBOARDS





WHY IQRF ALLIANCE WAS CHOSEN

Simple physical
installation

MESH network –
sensors communicate
by their own RF
network, HA in case of
GW failure

Open environment –
multiple vendors
alliance

DEV kits for testing,
with reference
documentation

Cloud ready solution

IoT GW monitoring with
notifications



Well, then don't go to that places...

Doctor, I broke my arm in three places !!!

Doctor, I broke my arm in three places !!!



JISTOTA MODERNÍ MEDICÍNY