



# SAP Innovation Awards 2019 Entry Pitch Deck

iFARM- Thank you, Health Next!

B3 Digital Solutions

## iFARM Introduction Video



<https://bit.ly/2DerKut>

**iFARM, a platform for natural to artificial intelligence brings back the human touch of healing using modern technologies like Artificial Intelligence.**  
**reBOT is a virtual nurse navigator to help patients suffering from chronic problems rehabilitate and improve outcomes leading to longevity and increased patient wellness.**  
**reCON is a recommendation engine leveraging the power of AI to drive the outcomes of reBOT interactions to successful patient longevity**

# iFARM- Thank you, Health Next!

## B3 Digital Technology Solutions



### “Quote”

**“This is most exciting solution found for survivorship”**

-Cancer Registry Manager, Oncology Centre,\*\*\*\*\* Hospital

**“Keen to see the impact of AI with the help of iFARM, looks promising”**

-Acting Division Chief, Breast Care Centre, Medical Affairs,\*\*\*\*\* Hospital

**“Looks very promising”**

-CCAMP

### Challenge

20% or even less is success rate of chronic disease treatments especially in later stages, cost of treatment is unbearably high and 80% of patients suffer from psychological distress. Channels of reaching patients post treatment remain scattered and un-coordinated with no clear success results.

### Solution

reBOT is nurse navigator which is build to help improve survivorship outcomes in cancer cases. It is trained to provide personalized care. Evidences collected by reBOT is used to personalize treatments and in precision medicine . reBOT sends evidences to reCON which uses AI and Big Data to provide personalize and precise recommendations to providers by leveraging clinical and non-clinical evidences.

### Outcome

The survivorship is a direct result of the focused engagement. With a virtual nurse holding the patients hands and technology powering treatment recommendation, the patient feels empowered to take their wellness and recovery in their own hands.

**Improve life expectancy by 30%**



**Reduce reoccurrence rate by 50%**



**Improve rehabilitation by 60%**





## Partner Information

### B3 Digital Technology Solutions

*We are a small, ambitious startup aiming to improve treatment outcomes and save lives. Watch us pitch [here](#)*



iFARM is a transformational journey from natural to artificial Intelligence to transform patient levels with continuous engaging care.

Preventative care, personalization and precision treatment can improve health outcomes in chronic diseases leveraging behavior data, bio bank data and genetics data along with historical clinical and non-clinical outcomes. To achieve the desired quantitative and qualitative outcomes, company leverages BIG DATA and AI to drive analytics and innovation to achieve the healthcare outcome goals.



## Business Challenge & Objectives

### BUSINESS CHALLENGES:

- Ø Lack of real-world evidence data needed to solve health problems.
- Ø Lack of standards around the real-world evidence data for data collection, storage and exchange and AI in healthcare.
- Ø Lack of processes and complete data and to identify, collect, process, search and analyze relevant structured and unstructured data.
- Ø Apprehension around AI and technology in using for recommendation in clinical space.
- Ø Educate and motivate people for preventative measures and data submission.

### OBJECTIVE:

- To develop tools and technologies to collect, curate and analyze data for discovery and recommendation.
- Improve survivorship of patients suffering from chronic disorders such as cancer.
- To personalize the healthcare outcomes at every stage of patient life cycle from diagnosis to cure.
- Provide patients an engaging, secure platform for wellness.





## Project / Use Case Details

To build a precision medicine platform utilizing evidences from real-world clinical, research and non-clinical world about health to improve health outcomes, patient economics and reimbursements.

### Objective:

- ❖ Build and leverage existing **clinical recommendation engines** harnessing data from clinical and non-clinical world.
- ❖ Build a **tool to engage with patients** to collect evidences and help improve survivalship outcomes.
- ❖ Build **tools to enable preventative care**, precision diagnostics and precision medicine.

### Key success factors:

- Ability to engage out-patients to conduct surveys and engage them in survivorship programs.
- Ability to conduct multi-dynamic recommendation with absolute precision which could be tested, validates and integrated in regular clinical practice.



## Project / Use Case Details

# iFARM

## BIG DATA DISTRIBUTION FOR HEALTHCARE

### STAGE 1



Out patient  
Engagement -reBOT

### STAGE 2



Recommendation  
Engine-reCOM

iFARM is an analytical platform for precision medicine.  
reBOT is a virtual nurse and reCOM is treatment recommendation engine.  
Evidences collected by reBOT is used by reCON to provide precision medicine and personalized treatment recommendations.



Certified by Industry Experts

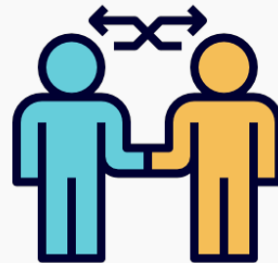


## Project / Use Case Details

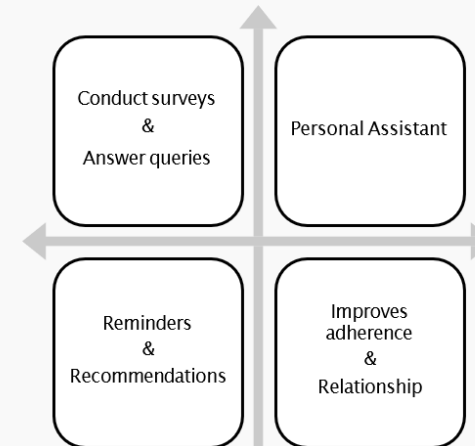
### IFARM - reBOT

- ❑ Can be installed on Mobile app or Messengers to use
- ❑ Work on top of existing SAP Health Engagement Platform
- ❑ Acts as a patient advisor
- ❑ Wellness engager

#### reBOT – A patient engagement solution



reBOT  
A survivorship Bot



BIG DATA



IN-MEMORY



ARTIFICIAL  
INTELLIGENCE





## Project / Use Case Details

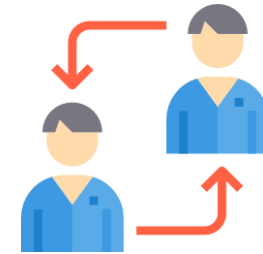
### Users



**Clinical Research  
Department**



**Clinical Oncologists  
Department**



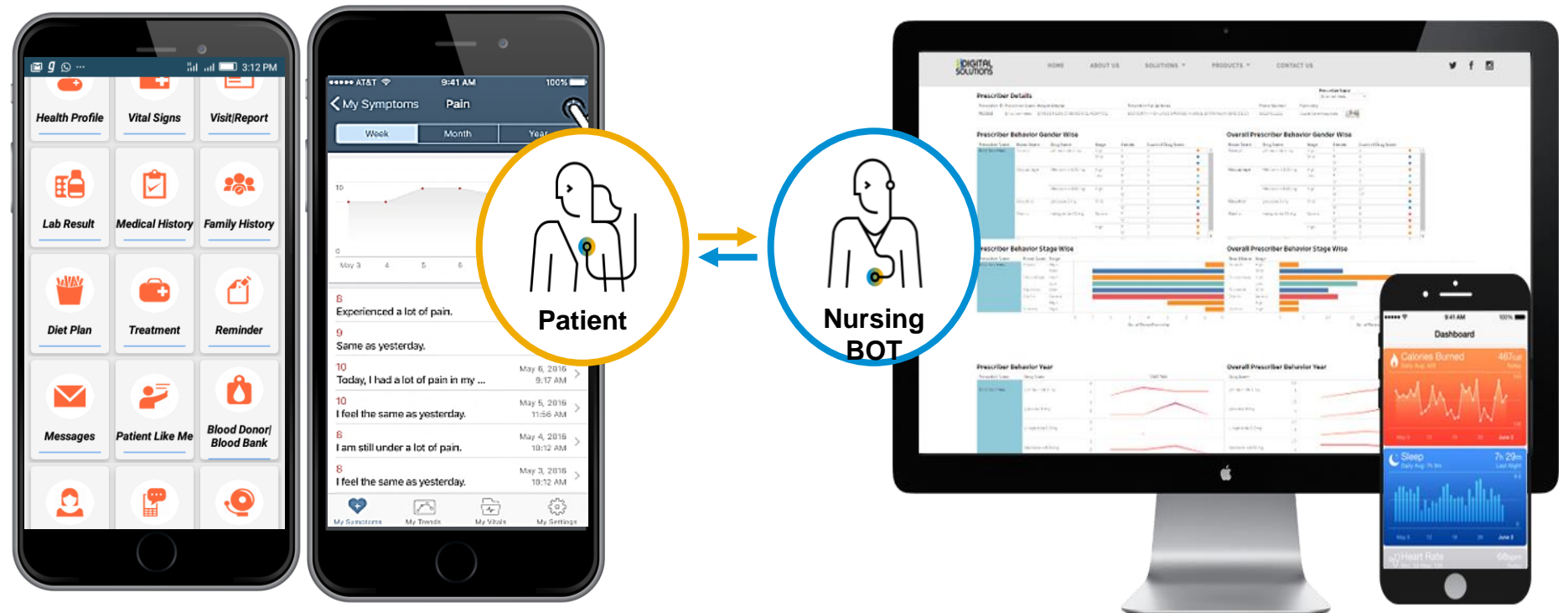
**Nursing &  
Rehabilitation Department**



# Project / Use Case Details

## IFARM - reBOT

Nurse Navigator engages patients to help them rehabilitate after recovery and help survive cancer. It collects evidences to analyse behaviour and personalize treatments.





## Project / Use Case Details

### IFARM-reCON

#### reCOM- A recommendation engine

Harness available data from biological researches, clinical evidences, environmental and drug researches. Leverage OMICS and out-patient behavior data to discover markers, precision drugs, precision diagnostics and personalized treatments and therapies.



BIOLOGY



PHARMACOLOGY



GENETICS



PHENOME



BEHAVIORAL  
GENETICS



BEHAVIORAL



CLINICAL



PREVENTATIVE  
CARE



ACCURATE  
DIAGNOSTICS



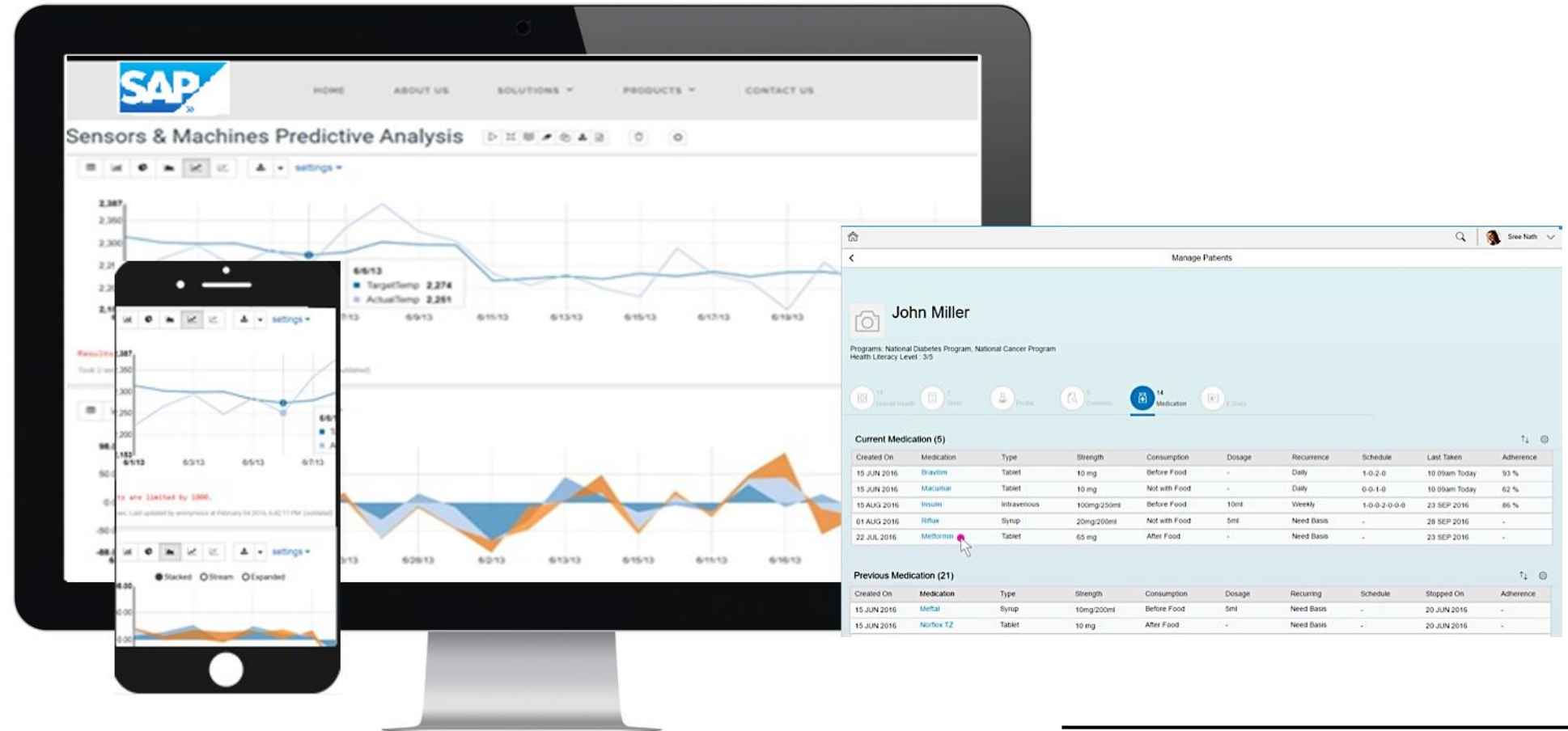
PERSONALIZED CARE



# Project / Use Case Details

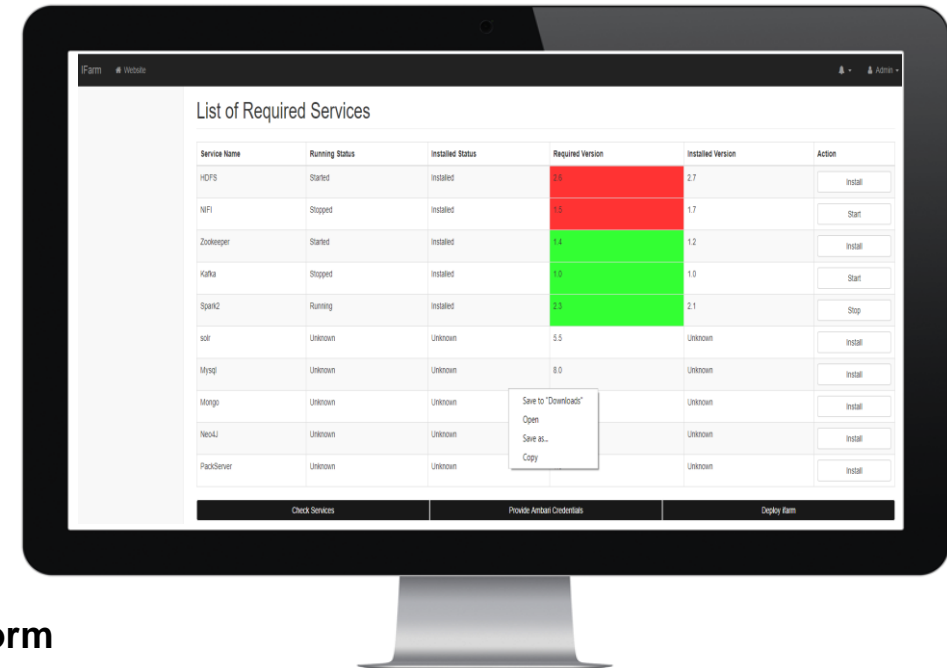
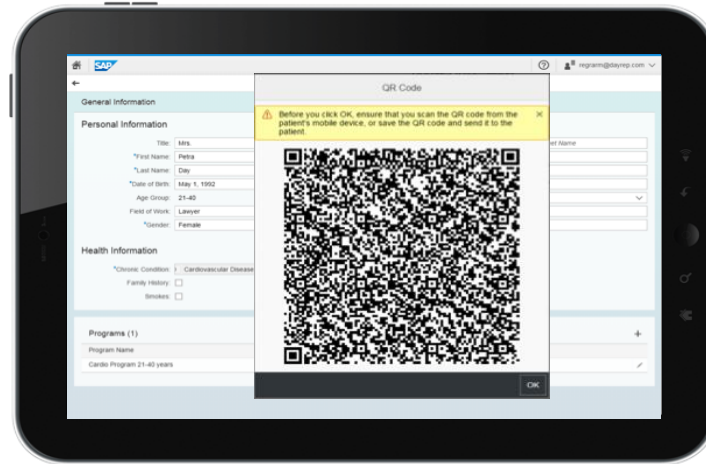
## IFARM-reCON

Recommendation engine integrating with **SAP Cloud Platform** which integrates seamlessly with EMR.





# Project / Use Case Details



## Secure On-Boarding/Off-Boarding – Use SAP Plarform capabilities

- Scan QR code
- Customer-definable password policy
- SAP ID service is used for secure logon and Single Sign-on
- Opt-out and export data in open, CDA based format that can be imported into other health applications
- Dedicated process for data deletion

## Single window management of the ecosystem

- Install, configure, deploy and manage iFARM distribution on **SAP Cloud platform**.



# Benefits and Outcomes

## Business / Social

- ✓ Focus on knowledge exchange
- ✓ Data from platform like SAP Health engagement : clinical trials, lab data all ingested in one single application
- ✓ Generation of integrated insights and application services that support coordinated patient-centric, health and wellness scenarios
- ✓ Provide up-to-the-moment insights for improved decision making and greater patient and population health insights

## IT

- ✓ A federated infrastructure
- ✓ Enable secure data sharing
- ✓ Integrate evolving data sets across the healthcare continuum
- ✓ Speed of taking diagnostic decisions and after –care
- ✓ Ability to take real-time decisions powered by a secure, agile platform

## Human Empowerment

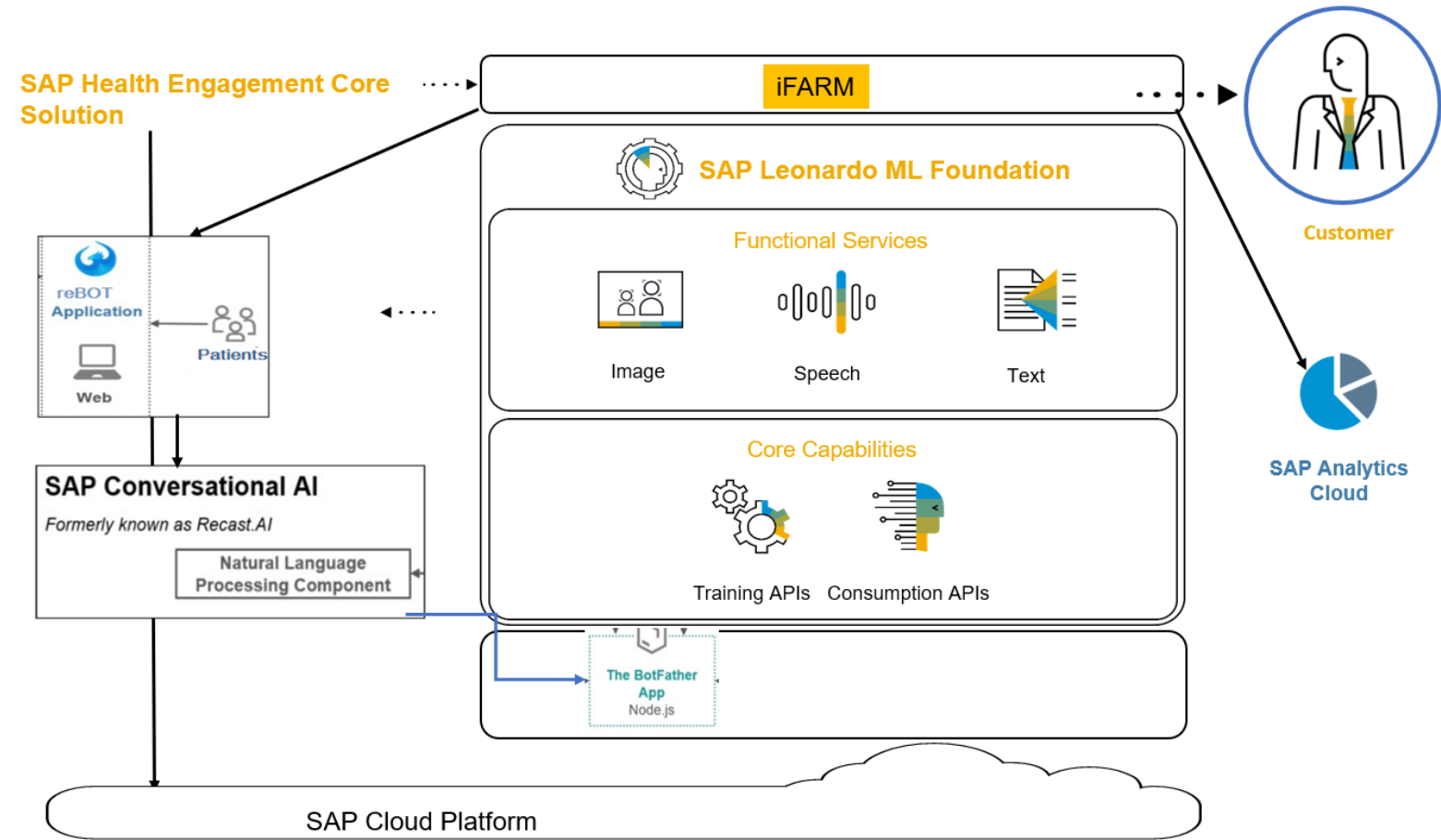
- ✓ Using bots as an engaging platform start
- ✓ Orchestrate care across sectors
- ✓ Foster collaboration
- ✓ Focus on rehabilitation
- ✓ After-care leveraging data to show patient that care does not stop at diagnosis
- ✓ Encouraging patients to take wellness in their own hands





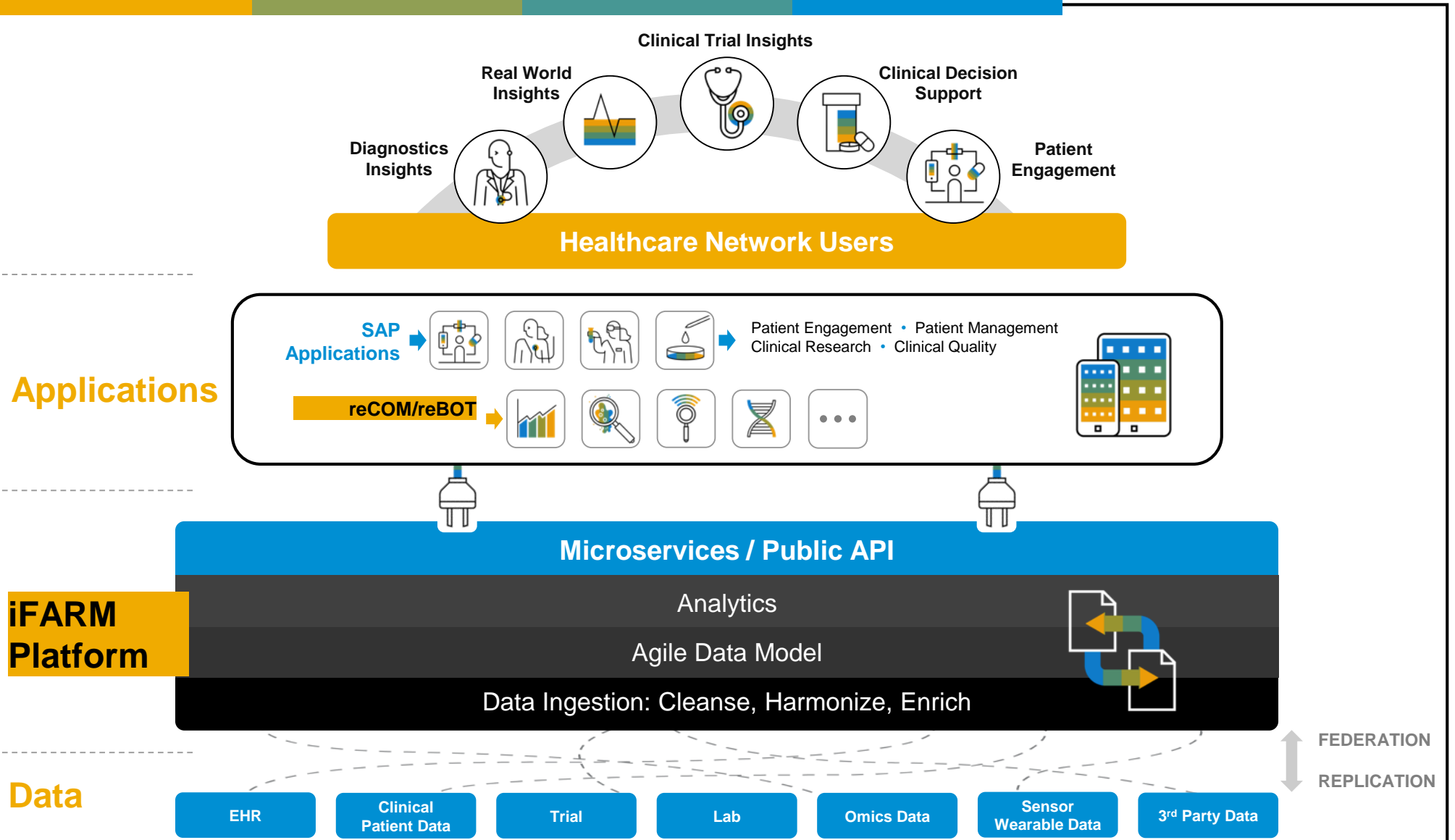
# Architecture

## SAP Cloud Platform applications and platform powering iFARM





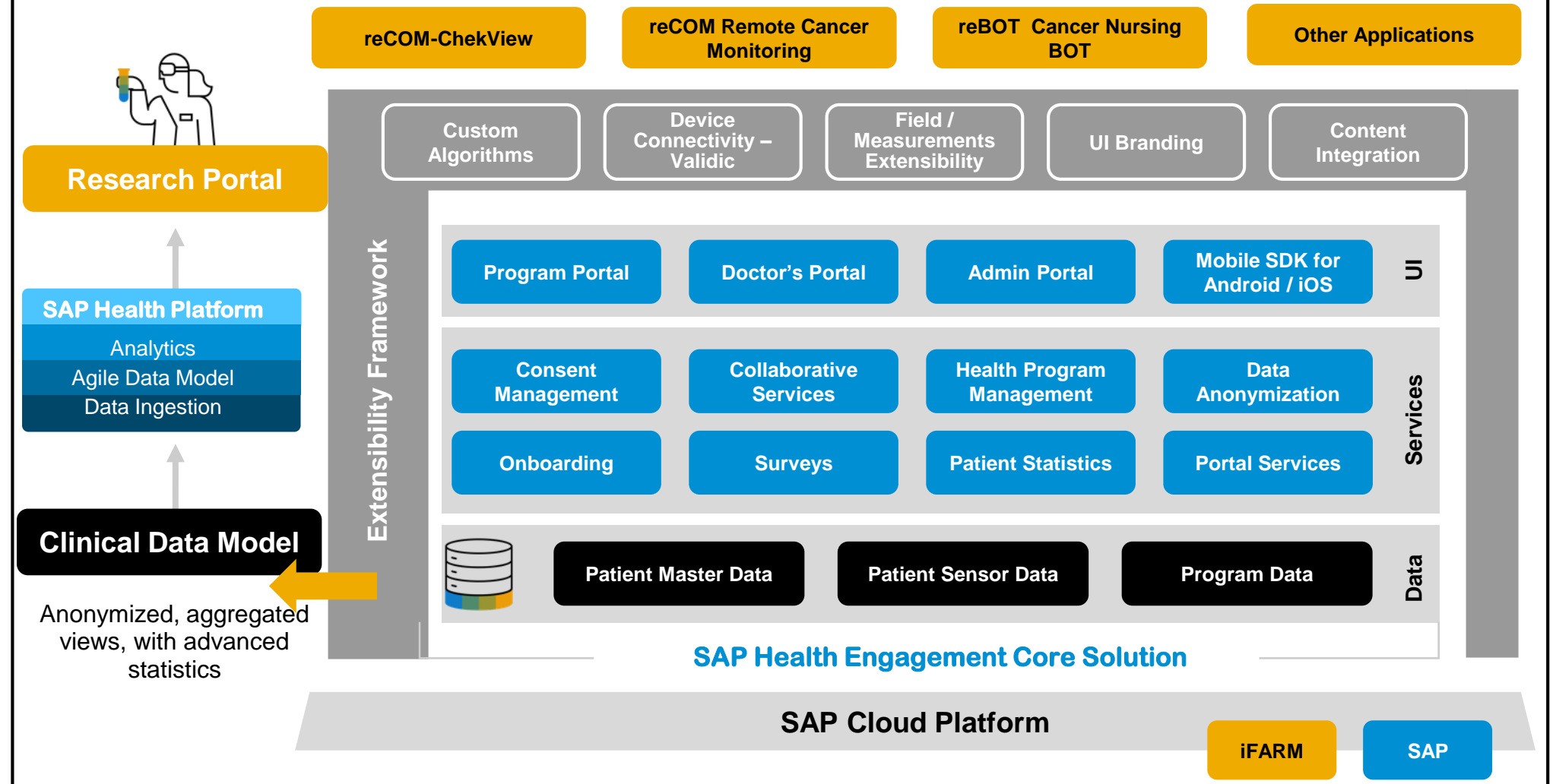
# Architecture iFARM Foundational Landscape with SAP Health Engagement





# Architecture

## iFARM extension on SAP Health Engagement





## Deployment

Date of Deployment or POC: November 2018

Number of live users:

### SAP Technologies Used:

SAP Leonardo Machine Learning Platform	Live
SAP Leonardo Chatbot	Live-standalone
SAP Analytics Cloud	POC
SAP Health Engagement Integration	POC
SAP Qualtrics Integration(for patient and hospital survey)	To be discussed

Server Processor: Intel Xeon

Linux Distribution: Suse



## Emerging Technologies and Use Cases

The following Emerging Technologies and use-cases are part of the project and describe the contribution

	Technology or Use Case	Yes /No	Contribution to Project
1.	Machine Learning / Artificial Intelligence	Yes	Leveraging the <b>SAP Leonardo Machine Learning</b> Platform on which the custom algorithms of iFARM for patient recommendation would run.
2.	IoT		
3.	3D printing		
4.	Blockchain		
5.	API Economy / Integrate the Intelligent Enterprise	Yes	Deriving the analytics on patient healing and statistics with SAP Analytics Cloud which in turn would be integrated back to the mobile application running iFARM app and the recommendation engine.
6.	Cloud Native / Event Based Architectures		
7.	Extending the digital core with SAP CP / ABAP in SAP CP	Yes	Leveraging the <b>SAP Health Engagement</b> application build on SAP Cloud platform for features as sing on/authentication/patient information and trials registration which forms the link before iFARM application.
8.	SAP Leonardo Application ( extending SAP application, using Industry Innovation Kits or result of Design Thinking workshop)	Yes	Yes <b>Design Thinking</b> with customers to understand the needs and how the application would shape up.