![ptc LIVEWORX — A NEW ERA IN PRODUCT LIFECYCLE INNOVATION]

SESSION ID: Il1225C

BUSINESS EXPANSION WITH ROCHE DIAGNOSTIC'S REMOTE SERVICE

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AGENDA

1

Introduction to **Kalypso and Roche**

2

Roche **Remote Services** Deep Dive + Use Cases

3

Key **takeaways**, best practices + lessons learned

LIFE SCIENCES WITH KALYPSO

Delivering better patient outcomes through digital transformation

From PLM and digital QMS to connected products and smart manufacturing,
we work with 30 of the top
50 life sciences companies to help
them improve patient lives and stay competitive in a digital world.

DO DIGITAL WITH PURPOSE.
SOLVE BIG PROBLEMS.
BETTER HUMAN OUTCOMES.

Delivering better patient outcomes through digital transformation.

Leading PTC Services Partner

Strategic Advisory I Implementation I Managed Services

15+ years
delivering value with PTC
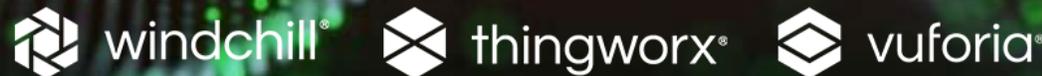
250+
clients across industries

400+
PTC global practitioners

creo®   windchill®   thingworx   kepware®

vuforia™   onshape   ptc® flexplm®

PTC Partner Network Recognition

advanced global system integrator

windchill®   thingworx®   vuforia®

2021
ptc
SYSTEM INTEGRATOR
PARTNER OF THE YEAR

ROCHE DIAGNOSTICS AT A GLANCE

Integrated solutions for laboratories, clinicians and healthcare systems
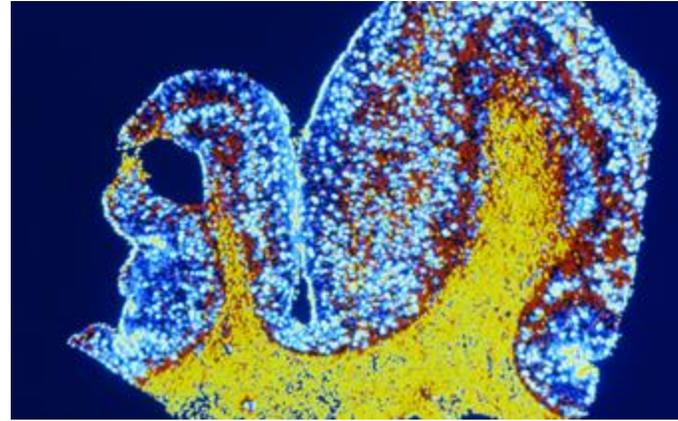
World Leader in in-vitro Diagnostics*

Laboratories perform >29b Roche tests each year, obtaining valuable insights from blood, proteins, cells, or RNA/DNA; working to improve the lives of patients in more than 150 countries.

Industry leading portfolio across disease areas:

Autoimmune, Cardiology, Endocrinology, Central Nervous System, Hematology, Hepatology, Infectious Disease, Inflammatory, Metabolic Diseases, Neurology, Oncology, Pulmonology and Women's Health.

Wide range of Products, Services and Solutions:

Analysers, Assays, Clinical Decision Support, Consulting, Digital Diagnostics, Disease Management, Lab Automation and Software.

*In vitro diagnostics are tests done on samples taken from the human body, such as blood, urine or tissue.

ROCHE REMOTE SERVICE IN NUMBERS

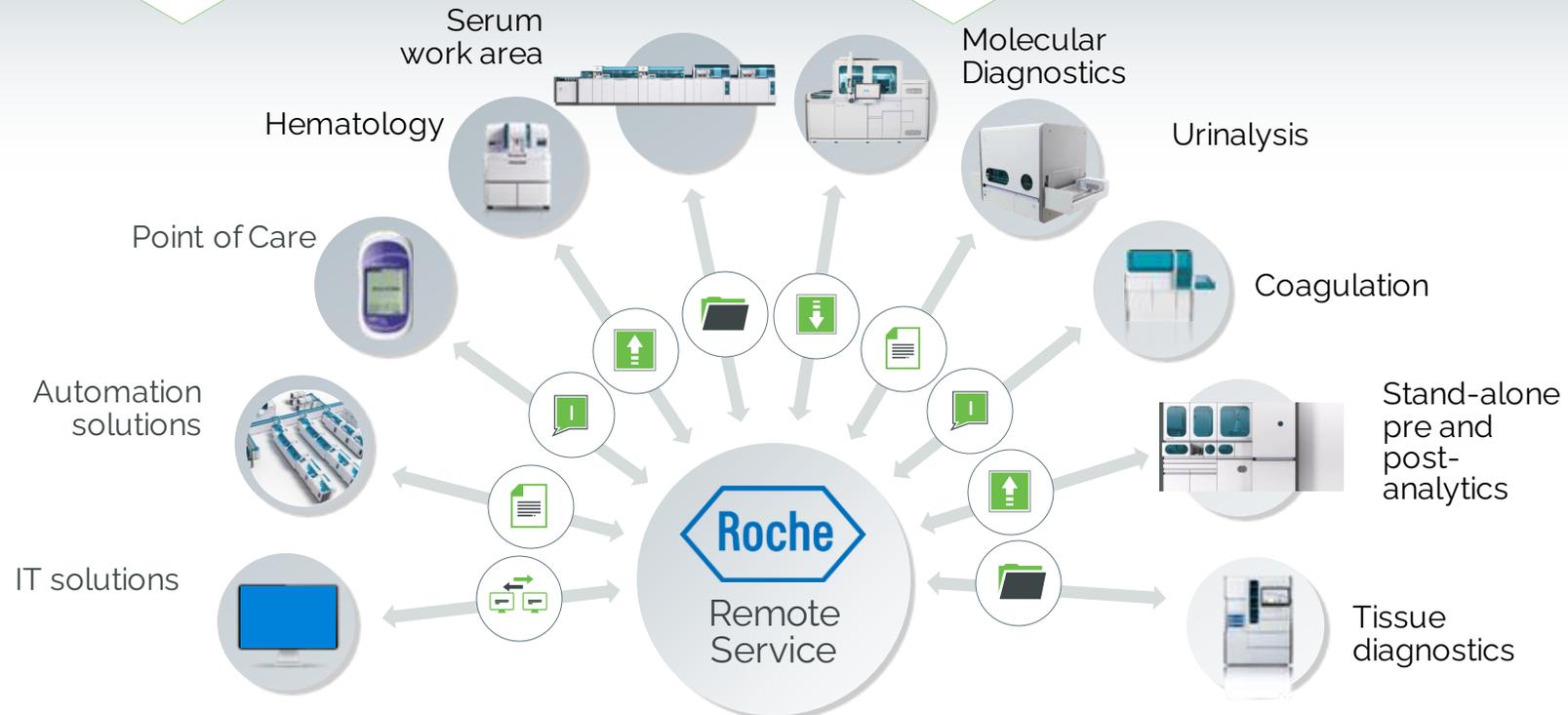60k devices & IT systems using 40k gateways in > 140 countries

> 100 different asset types

> 233 GB (150k files) data upload per day (Ø in 2022)

> 7'000 users distributed globally

Yearly growth of 5-10% of the installed base

Increasing growth of data upload

Serum work area

Hematology

Molecular Diagnostics

Point of Care

Urinalysis

Coagulation

Automation solutions

Stand-alone pre and post-analytics

IT solutions

Roche
Remote Service

Tissue diagnostics

REMOTE SERVICE KEY USE CASES

Connecting a Roche device using Remote Service enables a wide range of benefits

REGISTRATION / TRUST

Trustworthy assets

CRM Integrated device management

REMOTE SUPPORT

Instant remote error analysis (Screen sharing / Port tunneling)

Remote task execution

DIGITAL UPDATES

Production information

Software updates and other more

DIGITAL UPLOADS

Device data transfer for advanced analytics

Telemetry data collection and notification services

HIGHER UPTIME AND REDUCED DOWNTIME

Detect, identify and repair potential issues before they occur.

Provide guidance and support just when required.
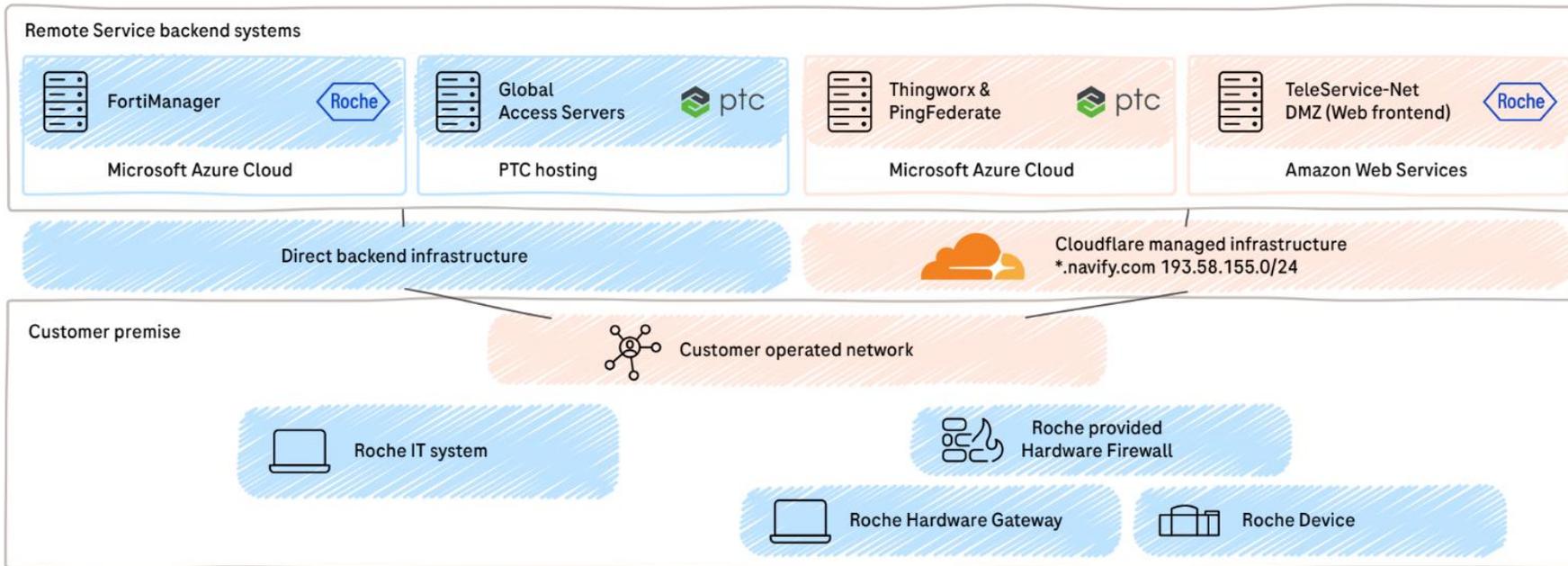
ALWAYS UP TO DATE AND QUICK ISSUE FIXES

Replace physical media and delays by digital updates.

Have remote support to see device status to support.

SECURITY AND DATA SAFETY

Remote Service is certified according to ISO27001, ISO27017, ISO27018 and ISO13485. HIPAA compliance is in process.
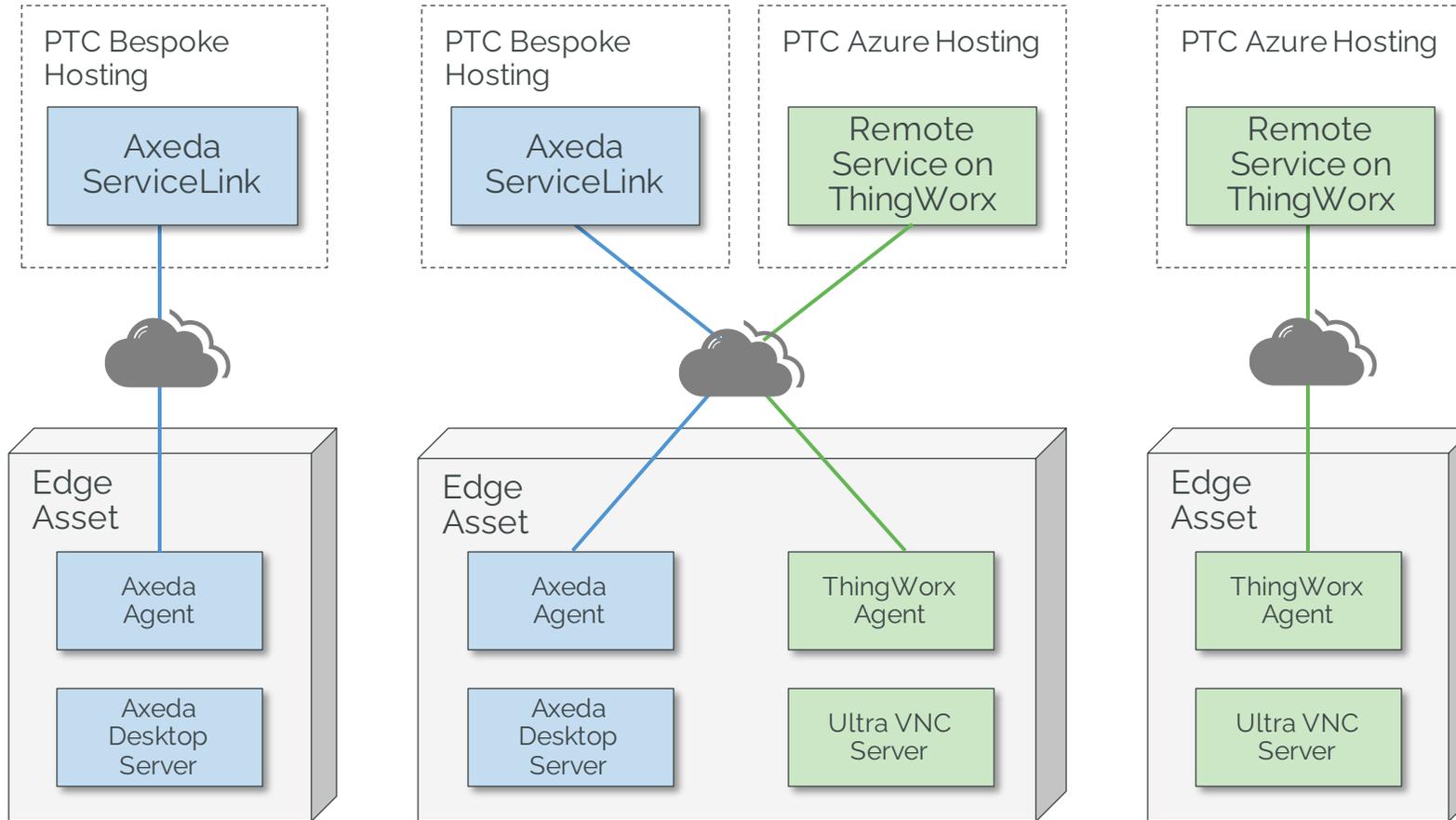
SOLUTION STACK – TECHNICAL ARCHITECTURE

- Separate environments for Global and China regions

- Multiple instances of the solution within each region to support various levels of testing, verification and validation

- Deployment automation and use of GitLab integration

MIGRATION APPROACH
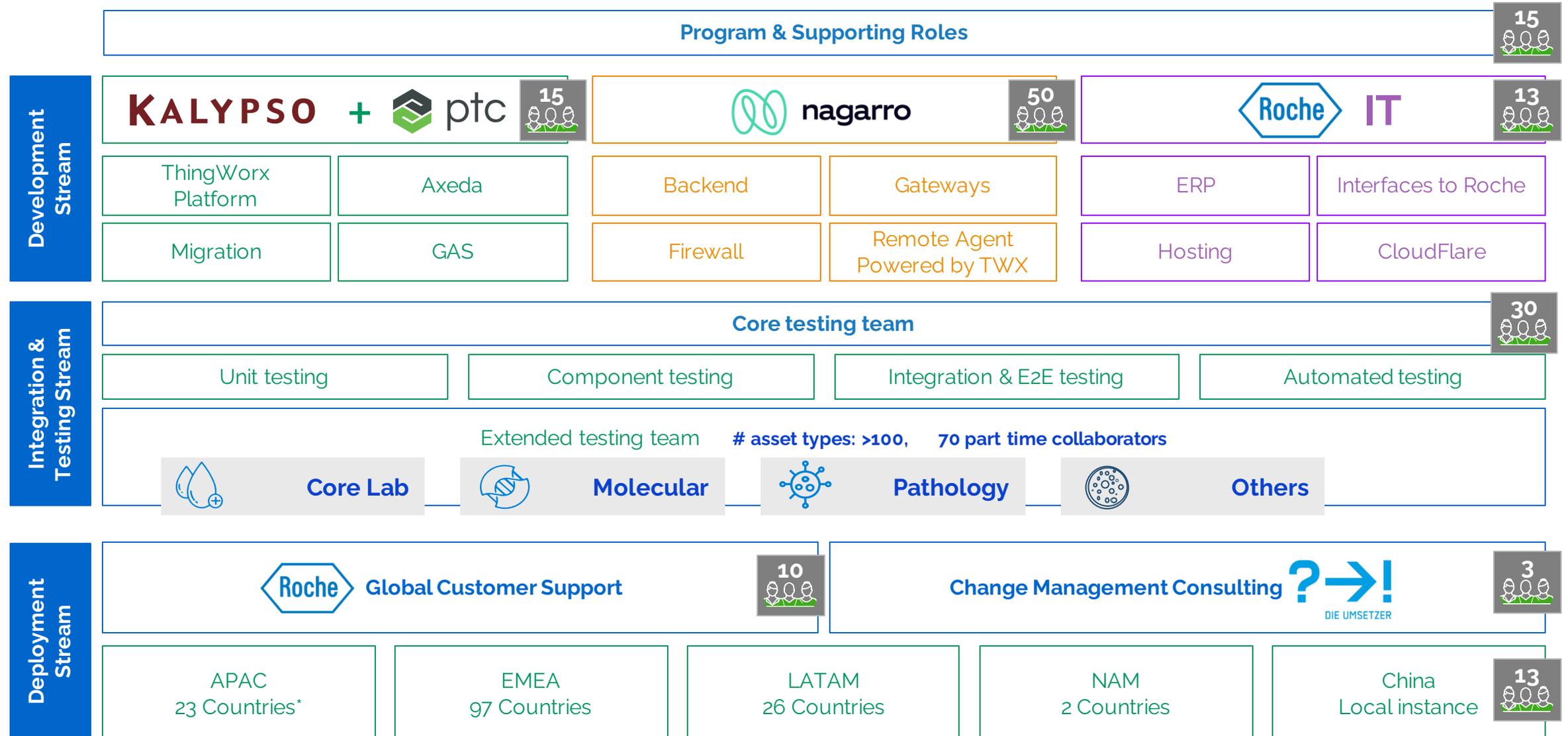
As-Is   Transition state   To-be

Flow overview:

- Select Asset(s) for migration

- Perform data quality checks & business rules validation

- Deliver new Agent software and upgrade scripts to the Instrument

- Onboard asset in TWX

- Perform cleanup on the Instrument to remove legacy software

ONE TEAM WITH COMMON OBJECTIVE

Program & Supporting Roles — **15**

Development Stream

KALYPSO + **ptc** — **15**

ThingWorx Platform	Axeda
Migration	GAS

nagarro — **50**

Backend	Gateways
Firewall	Remote Agent Powered by TWX

Roche IT — **13**

ERP	Interfaces to Roche
Hosting	CloudFlare

Integration & Testing Stream

Core testing team — **30**

Unit testing	Component testing	Integration & E2E testing	Automated testing

Extended testing team   # asset types: >100,   70 part time collaborators

Core Lab	Molecular	Pathology	Others

Deployment Stream

Roche Global Customer Support — **10**

Change Management Consulting ?→! DIE UMSETZER — **3**

APAC 23 Countries*	EMEA 97 Countries	LATAM 26 Countries	NAM 2 Countries	China Local instance — **13**

* excluding China

BUILD INCREMENTALLY WITH FAST, INTEGRATED LEARNING CYCLES

	Oct 21-Dec 21	Jan 22 - mid Mar 22	mid Mar 22 - Jul 22	Aug 22 - Oct 22	Nov 22 - Jan 23	Feb 23 - mid May 23	mid May 23 - Aug 23
	PI 1	PI 2	PI 3	PI 4	PI 5	PI 6	PI7
	Setting foundation	Basics feature set	Core workflows integration	Win10 readiness & User experience phase	Win10 go-live & TWX feature completeness	Everything ready for go-live	Execute Win 10 + TWX remote upgrade
Main challenges	New team setup & ways of working	Execution of current PI and parallel preparation for the next one	China specific regulations	Environment / UI stability and performance

More work than expected | Base product and infrastructure issues

Windows 10 remote upgrade high failure rate | Customer concerns triggered by affiliate engagement | Finish in time! |
| **Adjustments** | Team training and coaching | Adjustment in PI cadence - Inspect & Adapt iteration implementation | Setup China local implementation team with support from Kalypso | Enhanced testing on NFRs

Extra resources to meet timelines | Regular engagement with PTC

Integration of fixes

Collect more data from installed base. | Global assessment of regulatory / security compliance | We will see :) |
| **Continuous User feedback** | | User demos
Early adopters group creation | User demos
Early adopters feedback | User demos
User experience phase (UEP)
Hackathon for integrated systems | User demos
First Customer Monitoring for Windows 10 upgrade | User demos
Agent Early access UEP in production: affiliates & instruments | Go Live - First Customer Monitoring for Thingworx |

USER FOCUS

User insights and feedback are the biggest assets

Early adopter group
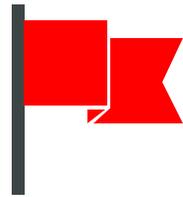Local Subject Matter Experts representing different regions

&

UX Lead
Making a link between user needs and development team

Get user perspective

Identify show stoppers and critical red flags

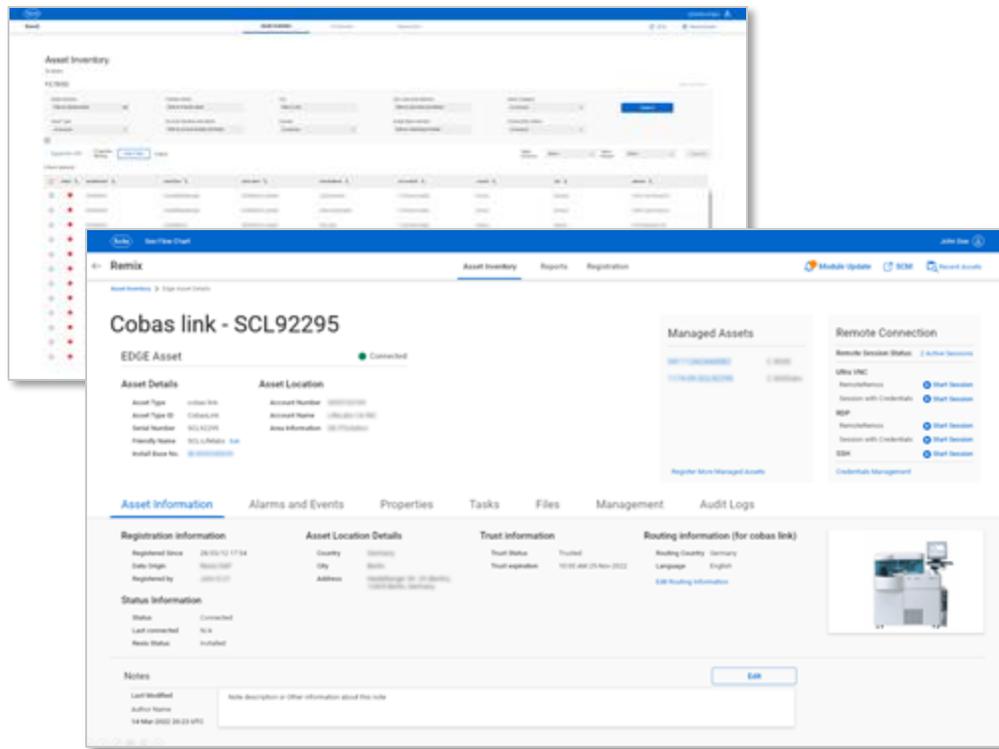**Find and use small tweaks with maximum impact**

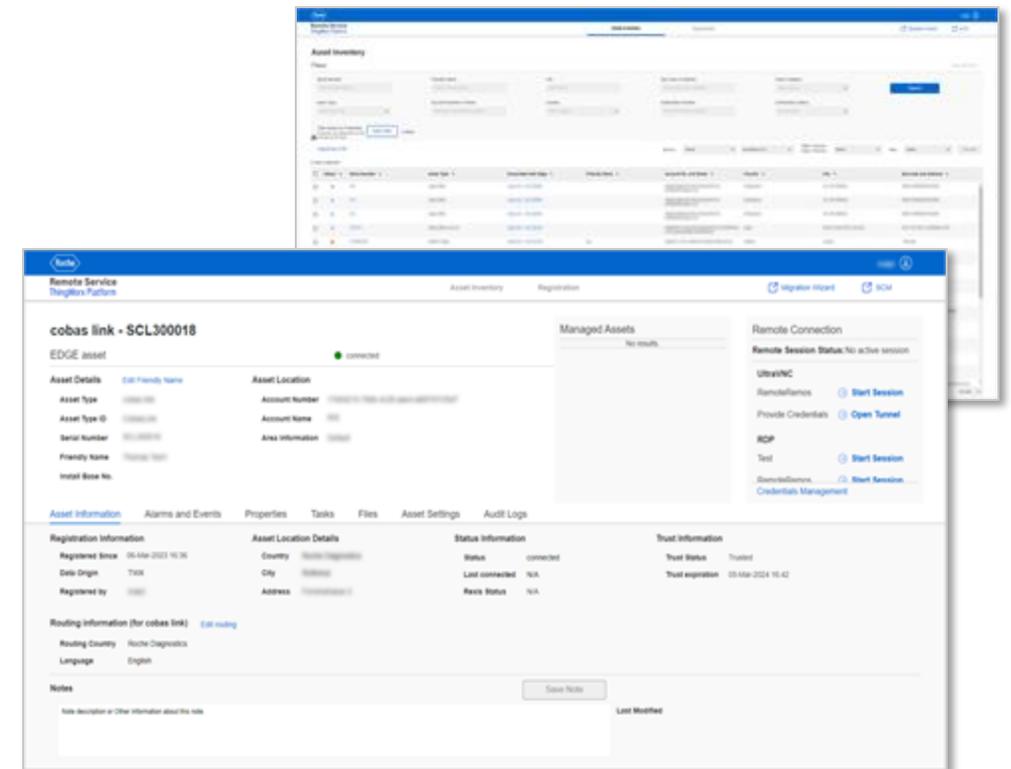**Build your local community**

Ensure business continuity and deployment success

UI / UX JOURNEY – KEEPING END USERS IN FOCUS

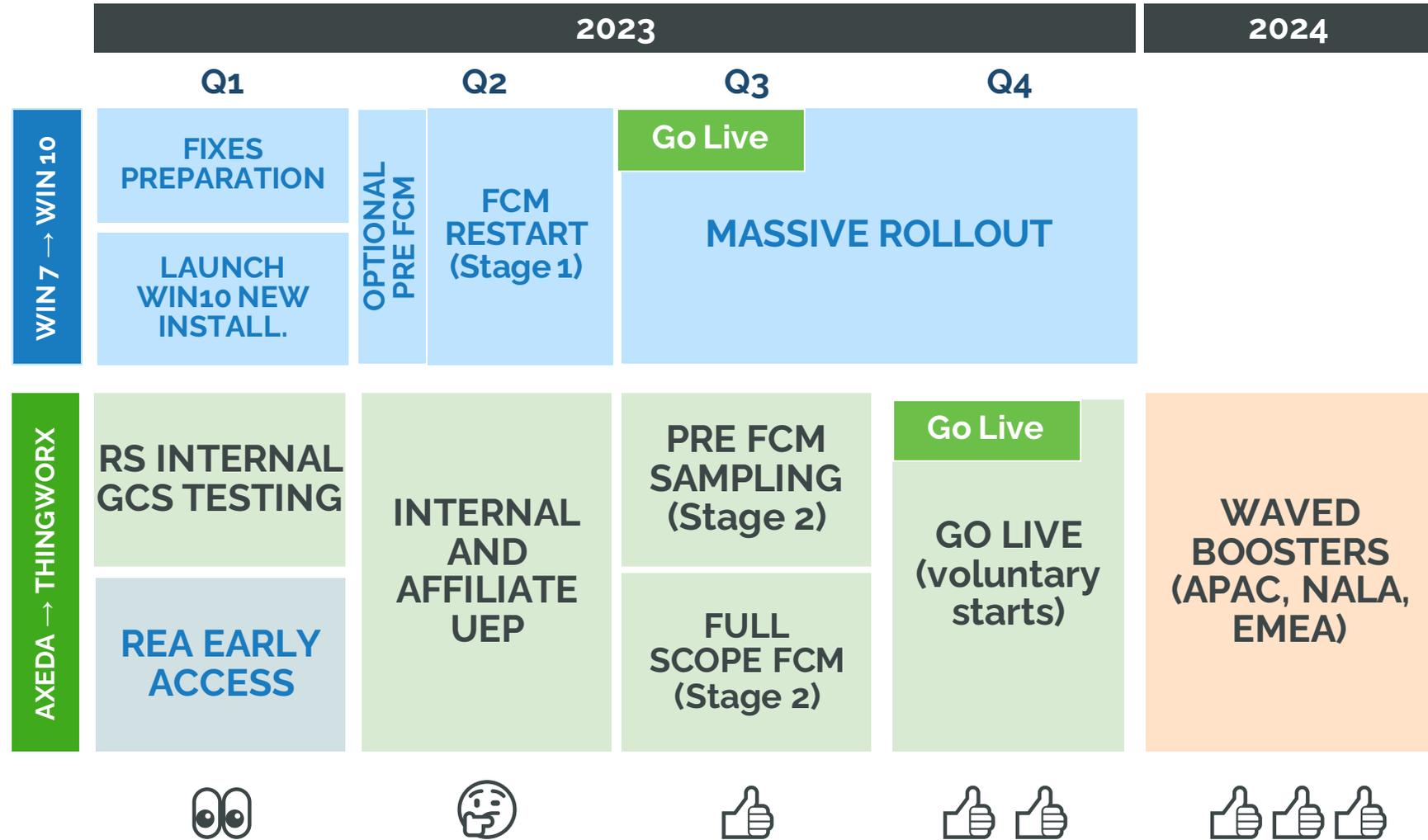Screenshot from **wireframe**   >   Screenshot from the **final product**

2023-2024 OUTLOOK: THE STAGED APPROACH

We apply the next set of learnings moving forward

- **Learning 1:**
  Go into production asap

- **Learning 2:**
  Include a varied install base to collect enough observations

- **Learning 3:**
  Take incremental steps, coming closer to customer setups with each step

GOAL: get more and more confident before going to customers

	2023				2024
	Q1	**Q2**	**Q3**	**Q4**	
WIN 7 → WIN 10	FIXES PREPARATION / LAUNCH WIN10 NEW INSTALL.	OPTIONAL PRE FCM / FCM RESTART (Stage 1)	Go Live / MASSIVE ROLLOUT		
AXEDA → THINGWORX	RS INTERNAL GCS TESTING / REA EARLY ACCESS	INTERNAL AND AFFILIATE UEP	PRE FCM SAMPLING (Stage 2) / FULL SCOPE FCM (Stage 2)	Go Live / GO LIVE (voluntary starts)	WAVED BOOSTERS (APAC, NALA, EMEA)

CLOSING NOTES

Work as a One Team: create a safe and inclusive environment where everyone can speak up no matter what's their role or organization their belong

Work with scale in mind, make performance testing a recurring ritual

Work for purpose: engage with your team so they understand why we do things and what's really important at this stage - team will commit and prioritize correctly

Engage Users to provide constant feedback, work with UI/UX experts to ensure optimal workflows

Establish DevOps early on to automate deployments to multiple environments

And don't forget to have fun!

READY TO LEARN MORE?

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THANK YOU