Kaiser Permanente – Who are We ?

105,632 babies born at Kaiser Permanente facilities!

54,072 nurses help members of Kaiser Permanente through sickness and health

1M+ mammograms

21,276 physicians deliver first-rate health and health care to Kaiser Permanente members

11.8M people trust Kaiser Permanente with their health

208,975 employees help keep our members healthy and happy

$2.5B invested to benefit the health of our communities

800,000 kids will experience our Educational Theatre Program in 2017

TOP 5 for diversity on the 2017 "Top 50 Companies for Diversity" list

MEDICARE STAR RATINGS Seeing stars! Our Medicare health plans scored top marks for quality and service

138,478 surgeries performed by Kaiser Permanente physicians

250,000 volunteers donated blood to our Research Bank

Alice Raia – Who Am I and Why Am I Here ?

My Role
Vice President, Digital Presence Technologies

My Kaiser Permanente Path
Leading digital delivery & software engineering excellence

- Consumer Digital Channels
    - kp.org
    - Consumer Mobile App
- Mobility Center of Excellence (enterprise)
- Consumer Digital Strategy Program
- Kaiser Permanente School of Medicine Digital
- Agile SDLC Methodology Owner
- DevOps Practice Owner (for kp.org & mobile as well as for the enterprise)

Member facing digital assets are key to care delivery

~300M visits to kp.org per year (**66%** from a mobile device)

6.1 M members registered on digital channels

50 M lab tests viewed

120k video visits

82% member visits related to managing care

25 M Prescriptions filled

27 M emails sent to physicians

Why DevOps at Kaiser Permanente ?

Our "uh oh" moment - we could not deliver predictably or frequently enough to meet business needs.
We needed a significant transformation

Our Reality Before DevOps

- 6 "big batch" releases per year – all painful and in red status before they started
- Scope introduced late due to fear "it will never go in if it misses this release"
- Siloed teams "I did my thing, here you go"
- Lengthy reviews, break points, handoffs, wait times along the way
- No feedback loop for developers
- Manual, error prone, "snowflake" processes, no standardization

Why DevOps ?

Executed a Value Stream Mapping exercise against our
September 2015 release

~$864,000 total lost productivity, per month*

Lack of predictability, lengthy gaps between releases.
All drive elevated levels of inefficiency and friction in delivery cycle.

*Estimated loss of capacity per one development group consisting of 5 scrum teams, 75 people

Keeping The End State in Mind – What Does DevOps Give us ?

(3) COMPLEX
(bi-monthly releases)

Attributes	
• dependent on business or regional operational readiness	• tied to other systems of record releases that are less "agile"
• introduction of "new" technology	• complex testing and/or test data management

(2) ACCELERATED
(bi-weekly releases)

Attributes	
• new member experiences, capabilities and features on digital	• defects fixes, security remediation, operational hygiene, performance
• enhancements, A/B testing, analytics, soft launches	• campaigns, backlog

(1) CONTENT
(daily releases)

Attributes	
• content – new, changes, removal	• no code changes
• digital media assets – new, changes, removal	• regional specific content in a distributed model

Large complex releases – 2 months:
Large, complicated releases using a lot of resources, requiring extensive coordination between multiple groups and internal systems planning.

Accelerated releases – 2 weeks:
Less complicated code changes and enhancements that don't have to be tied to a large release. Can be implemented easily on a more accelerated schedule.

Content releases – daily:
In support of distributed publishing and campaigns.

Embarking on the DevOps Adventure — Building the "Factory of the Future"

Transforming in to a more mature product engineering and software delivery organization — executing on four tracks in building our practice.

Culture

Product

Pipeline

Platform

GOAL: Provide a scalable and stable environment to enable DevOps delivery.

GOAL: Increase throughput, elimination of manual error, predictability of releases, and reduce the cost of overall delivery.

GOAL: Define discernable work units (aka products) that have a longevity and distinct business purpose.

GOAL: Successfully transform the behaviors, philosophy, attitudes, and structures of the working teams delivering a product to be more aligned with Agile principles and DevOps methodologies.

Digital Corporate
Services & Solutions

Challenges & Road Blocks – Primarily Culture & People

You don't know how kp.org works.

I will just wait until the executive sponsor leaves... they never last.

We do things for a reason, and that's not how we work here.

Why is this attempt going to work? Others have tried before and filed.

Challenges & Road Blocks — How We Successfully Addressed Blockers

You don't know how kp.org works.

✓ Discovery sessions   ✓ Build trusted relationship
✓ Assign resisters responsibilities for finding solutions

I will just wait until the executive sponsor leaves… they never last.

✓ Build coalition of leadership support
✓ Demonstrate resilience ✓ Commit to formal program

We do things for a reason, and that's not how we work here.

✓ Start small & build upon early wins to show viability
✓ Gain buy-in from diverse groups   ✓ Resistance management

Why is this attempt going to work? Others have tried before and it flopped.

✓ Formalize the effort ✓ Identify measurable markers
✓ Include Organizational Change Management work

What Does The Beginning of "Success" Look Like ? April 2017 thru Today….

~600
Users utilizing the pipeline

Authors, Product Owners, Testers,
Engineers, Developers, Managers,
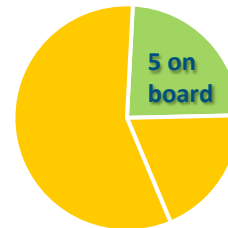Scrum Masters, Business Partners,
Project Managers, Consultants

>500
Developers

450
Avg Code
Commits/Day
in September

5 on board

5 squads on boarded
8 Squads planned for 2017
~20 Total Squads Planned

5
Automated Test
Frameworks

94
# of Active
Projects

5
Integrated Platform
Pipelines

20
Production
Releases

2,596
Learning culture – wiki
articles written and shared

965
Pipeline Service
Requests Completed

Average response time (in hours)

	KP Actual	Industry Standard
Service Request	3.7	8
Change Request	22	40

KP's new DevOps practice is responding
to service requests 47%, and
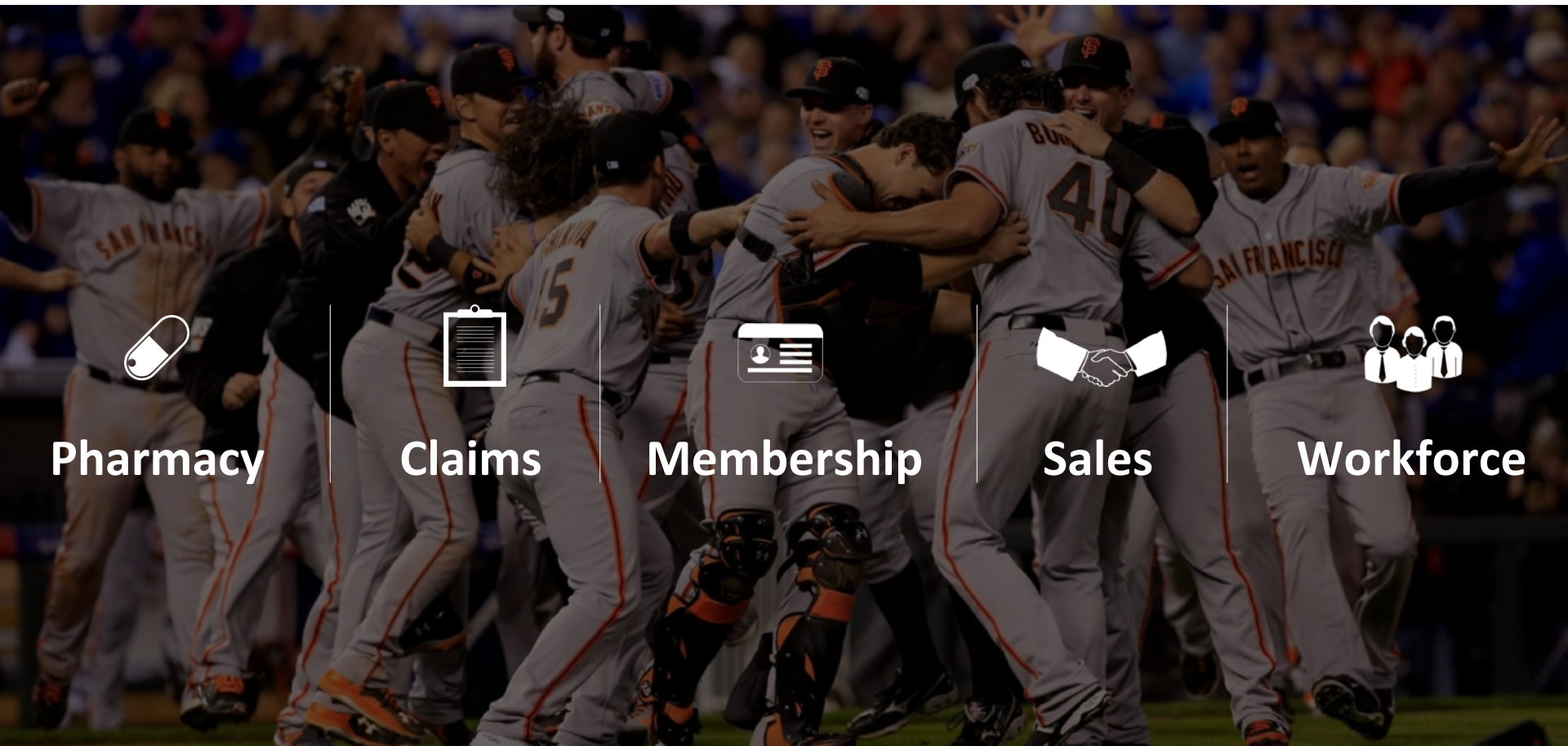change requests 53% faster
than industry standards.

Pharmacy | **Claims** | **Membership** | **Sales** | **Workforce**

Thank you!

KAISER PERMANENTE®