



UX Design

UX Requirements, Strategy and Notes

XDesign Consulting

JULY 2017

- **Empower** and enable users to accomplish their objectives
- **Provide meaningful actions in context** (what you see is what you need – when and where you need it)
- **Simple and intuitive system** that anticipates, leads and guides users
- **Built-in Intelligence** (defaults, next action, values, affordances, etc.)

UX DESIGN PROCESS



Abstract / Desire



Concrete / Interfaces

Research

- Personas/Roles
- Observation/Shadowing
- Journey Mapping
- Competitor Analysis
- SWOT Analysis
- UX Strategy & ROI Model

Requirements

- User Stories & Scenarios
- Business Processes
- Content (Data & Info)
- UX Functional Analysis
- Inferences & Opportunities
- Data and Architecture

Ideation

- Brainstorming Solutions
- Conceptual Design
- UI Framework
- Interaction Design
- Wireframes


Prototyping

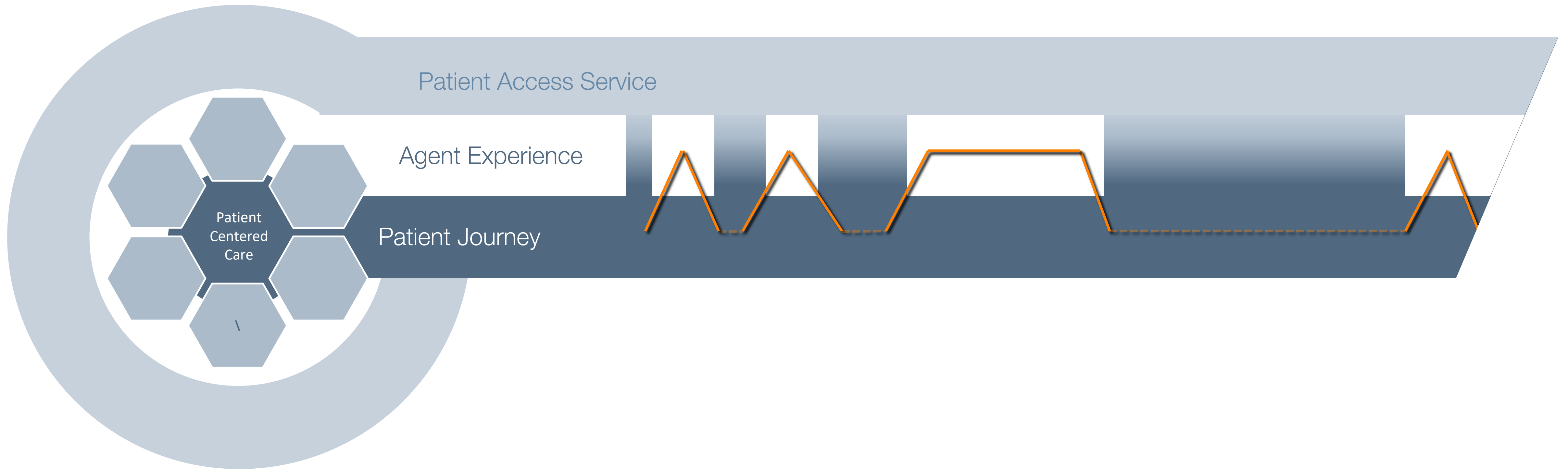
- Content Management
- Info. Architecture
- Prototype
- Detailed Design
- AB Testing
- U_Testing

UX Framework

- Components & Patterns
- Branding & Style Guide
- Visual Design
- UI Development
- Documentation
- UAT

PATIENT JOURNEY & AGENT EXPERIENCE

The patient journey  is the end-to-end patient experience with a healthcare organization, including all touchpoints: offline (real-world) and online (self-service/agent facing) across multiple channels.



The contact center is a focal channel where agents reactively and proactively interface between patients and the organization – always in the best interests of both. The agent experience is an important factor of patient satisfaction. The agent experience directly influences the patient experience.

PATIENT JOURNEY – Informs agent-facing design

Patient Experience/Journey Map for Treatment (based on Hackensack study)

Agent-Facing Opportunities & Recommendations	Access to specialists' list with filters and sorting: ~ credentials, reviews & compare ~ location & timing ~ eligibility (insurance)	CTI optimization Appointment booking optimization Patient Registration (streamlined & intelligent) Confirmation with easy and precise instructions	Manage lab referrals ~ scheduling (easy to follow treatment scheduling) ~ manage test results (communicate to patient) 360 degree view of patient	~ Easy to calculate Bill estimate ~ Optimize discharge process	~ Optimize post-discharge process ~ Follow up activities and surveys										
Voices we heard	"It's a social world, and people will rate doctors, like it or not. They want to see, compare and choose."	"Every single day, the staff need to help patients find their way around! Everyone gets lost here!"	"Pre-assessment discussions are so long; Doctors need to wait till these discussions end before they can see the patients"	"The focus is changing to keeping the patients out of the hospital as long as possible. Its all about preventive healthcare"	"When patients leave, they have no contact with the hospital"										
Touchpoints	Primary Physician	Home	Social Circle	Book Appt	Reach Hospital	Locate dept.	Meet MA	Meet Doctor	Labs	Get Treatment plan	Follow Treatment Plan	Revisit Doctor (Treatment)	Home	Social Circle	
	PRE-TREATMENT					DURING--TREATMENT					POST-TREATMENT				
Experience Phases	Anticipate			Enter		Engage					Exit		Reflect		
Problem Areas	<ul style="list-style-type: none"> Get information around insurance coverage No information beyond a name of a specialist Gather information about facilities and location Gather assurance about skill and capabilities No single integrated solution for research and booking 			<ul style="list-style-type: none"> Operator waiting time Carrying medical history Difficult to compare options for doctors/ clinic timings Long registration process Multiple clinic records are difficult to share Locating department No e-confirmation of booked appointment No intimation of delays at the clinic Long waiting times Parking issues 		<ul style="list-style-type: none"> Paper work Waiting for test reports Difficult to understand/ follow treatment schedules Visits may get rescheduled Missed follow-up visits Patients may not hear back on test reports Locating the test labs Locating the amenities on campus 					<ul style="list-style-type: none"> Discharge plan perceived as push-out strategy Preventive care is difficult to establish Billing is difficult to estimate 		<ul style="list-style-type: none"> Out-of-hospital status breaks contact w/ care team 		
Tasks, Steps & Data Gathering	<ul style="list-style-type: none"> A PCP informs patient to visit a specialist. A name is all that is shared. Patients need to visit sites like Healthgrades & Zocdoc: read about specialist's credentials & compare. One of the biggest concerns is around whether their insurance is accepted at the prescribed physician. Patients have a concern about whether the prescribed physician will be the most relevant for them. Patients seek information: credentials, location and timings Patients would also like to know the co-pay amount 			<ul style="list-style-type: none"> Users may want to take appt's without need of registering There is no followup or confirmation from hospital to patients on upcoming appointments The registration process is paper-heavy and redundant across the different touch points Locating the department & doctor to visit is a very difficult task due to the confusing layout and lack of signage. This requires hospital staff to unnecessarily help lost patients. There is no initiation of any delays from the hospital. Patients end up spending a lot of time in waiting areas. Patients are anxious. Entry problems around finding the dept. and long registration processes add to the anxiety. 		<ul style="list-style-type: none"> Patients do not easily recollect medical records A lot of discussion time happens with the MA to confirm various aspects of medical history. Doctors wait for MA to finish their work, as they cannot see a patient unless these earlier formalities are completed. There could be a gap between samples and reports. Reports go to the hospital, and sometimes hospital misses out on calling the patient to tell about the results. Doctors see a report only if the patient visits for a report consultation. If the patient is unaware about reports, report consultation does not happen. 					<ul style="list-style-type: none"> Patients need to pro-actively book follow up visits. Treatment schedules are difficult to follow and patient can miss out daily schedule. There is no track of whether the patient is following a routine. Difficult to estimate the final bill. The discharge team visits the patient for sharing the discharge plan. This is however perceived as a push-out strategy from hospital. 		<ul style="list-style-type: none"> Once the patient is out of hospital, there is no continuity in the care team. If the patient revisits as an inpatient, the care team is likely to be completely different. There is no platform from the hospital where patients can give feedback about the treatment they received. 		

Agent Experience:
 opportunities and recommendations for contact centers are inferred and extracted from the Discovery findings

AGENT EXPERIENCE – Typical Challenges for PAS Users

- Decentralized data and apps do not provide a cohesive, longitudinal/360 degree view of patients
- Navigation is not intuitive: *data driven and not task driven*
- Cumbersome UI, expensive to train and maintain
- Not enough system guidance and “built-in” intelligence
- Lack of automation negatively impacts call center KPI’s
- Outdated UI and lack of consistency not considered appropriate platform
- Expensive to change and maintain
- Cluttered screens (Visual “noise”, extraneous information, not scannable)
- User experience is not a simple, uniform, seamless, integrated experience
- Lack of actionable reporting and analytics

AGENT EXPERIENCE - Opportunities

- Increase patient satisfaction
- Care advisors can do their best to support patient with good tools
- Maximize # of pas/mskd patients converted to msk patients
- Staff spend less time navigating tools (integrated app)
- Decrease call time per patients
- Increase CA efficiency Improve data capture for reporting
- Decrease CA time spent on non-patient related work Increase physician satisfaction with PAS/MSK Direct
- Online access for patient (online access)

KPIs FOR POST DISCHARGE FOLLOW UP - example

Clinical

- % of follow up appointments within 7 days of discharge
- % completed post discharge referrals and diagnostics
- % medication counseling completed within 48 hrs. of discharge

Operations

- Calls executed within 48 hrs of discharge
- Call length (Average Handling Time – AHT)
- % unreachable patients
- Transfer rates (e.g. to specialists) – *Qualitative and Quantitative*
- Calls “done-in-one” (First Call Resolution)
- Call Volumes (Daily, Weekly, Seasonal)

Experience

- Agent Satisfaction (SUS) (Subjective, Industry standard U_Satisfaction)
- Task Efficiency (combination of usability metrics: agent steps AND visibility of each step)
- Projected agent efficiency increase (between current and anticipated solution)
- First Response and Average Handling Time – See next slide

TYPE 2: KPIs FOR COMPLEX CARE MANAGEMENT - example

Clinical

- % of missed appointments (office visits, diagnostic or therapeutic procedures)
- % medication counseling completed
- % counseling on physical activity recommendations

Operations

- % Calls executed every month as per care plan
- Call Length
- Call Transfers (to specialists)
- First Call Resolution
- Call Volumes (Daily, Weekly, Seasonal)
- Learning curve

Experience

- Agent Satisfaction (SUS) (Subjective, Industry standard U_Satisfaction)
- Time spent in error
- Task Efficiency (combination of usability metrics: agent steps AND visibility of each step)
- Projected agent efficiency increase (between current and anticipated solution)

PAS PRESALE METHODOLOGY - Major Activities

Week 1	Planning & scoping	<ul style="list-style-type: none"> ▪ Establish 'Tiger Team' ▪ Set goals and measurable objectives (KPIs) ▪ Set and manage policies, risks and scope of initiative
Week 2 ONSITE	Discovery, diligence & fact finding	<ul style="list-style-type: none"> ▪ Study current system/s (and comparative analysis of competitors) ▪ Customer engagement, observations, interviews, surveys ▪ Documentation <i>architecture, operational stats, data model, requirements, bus. process flows</i>
Week 3	Analysis	<ul style="list-style-type: none"> ▪ Persona study, journey mapping/task flows of current system/s ▪ Pain points, opportunities, inferences
Week 4 Week 5	Design	<ul style="list-style-type: none"> ▪ Efficiency, productivity and satisfaction study (measuring current system/s) ▪ Business POC (based on most frequent scenarios of use) ▪ Before vs. after analysis ▪ Demonstration of efficiency/productivity/satisfaction increase
Week 6 Week 7	Demo development & presentation	<ul style="list-style-type: none"> ▪ Application of efficiency/productivity/satisfaction increase to KPIs ▪ Compelling case

PAS PRESALE METHODOLOGY – Planning

Planning

- establish Tiger Team
- measurable goals
- establish KPIs
- scoping
- due diligence

Discovery

- existing systems observation
- interviews, surveys
- pain points, opportunities
- KPIs (operational stats)
- user stories, data, info

Analysis

- expert UX review
- personas, journey mapping
- task analysis
- inferences, opportunities
- innovation/improvement plan

Design

- before vs. after
- measurements/metrics
- application to KPIs
- POC
- UI framework

Demo/Presentation

- executive summary (*findings, decisions*)
- compelling business case
- efficiency improvement (*frequent tasks*)
- anticipated KPI improvements
- demo and next steps



PLANNING - Establish the Presale ‘Tiger Team’ (#1 Success Factor)

An expert multi-disciplinary “Tiger Team” that can be trusted is established. This requires of all team members:

- Healthcare domain knowledge
- Seniority and excellence in professional domain (rich ‘hands-on’ experience)
- Speed, creativity, innovation, risk-taking and excellent customer communication skills

Role	Description	Business Case Contribution
Leader / SME	The “glue” that holds the ‘Tiger Team’ together and to the customer. Manages, enables, ensures and inspires the realization of objectives. Scope, roadmap, priorities, risks	competency, trust, confidence, collaboration
Business Analyst <i>(Product Manager)</i>	Business & functional requirements, BP flows, business rules, KPI’s, operational stats and alignment with customer	anticipated KPI improvements, TCO reduction
Design / UX	Customer/user research, analysis (current system, tasks, call logs, diagnostics), inferences, SWOT, design concept, UI framework, flow optimization, interaction design, styles, medium fidelity prototype	measurable efficiency and productivity improvement, increased satisfaction
Architect / SE	Working PoC Architecture, platform, constraints (NFRs), integration, automation, process management, high fidelity prototype,	SI, performance/benchmark improvements, reduced maintenance
Sales / Marketing	Sales, SOW, framing, PR, account contact, PR	value for money, ROI, differentiator
UI Developer	Working PoC (supported by high-end visual design) Development, high fidelity prototype/Demo, HTML5, CSS	UI scalability, simplification by building intelligence into the system, rapid development

PLANNING - Measurements & KPI's

3 classes of metrics are considered:

- Clinical** *Example: Therapeutic procedures, medication counseling, office visits ...*



- Operational**
 Healthcare Related: *Example: ER capacity, Lab test turnaround ...*
 Contact Center Related: *Example: average handling time, call transfers, user learning curve ...*

Test	Target	Average	+ / -	Past 30 Results
Amylase	24 h	31	-22.58%	
ANA	168 h	180	-6.67%	
aPIT	72 h	78	-7.69%	
Basic Metabolic Panel	24 h	26	-7.69%	
Complete Blood Count	24 h	28	-14.29%	
Comprehensive Metabolic Panel	48 h	52	-7.69%	
Electrolyte Panel	24 h	23	4.35%	
Sedimentation Rate	96 h	94	2.13%	

- Experience** *Example: agent satisfaction (SUS), agent efficiency, efficiency improvement ...*

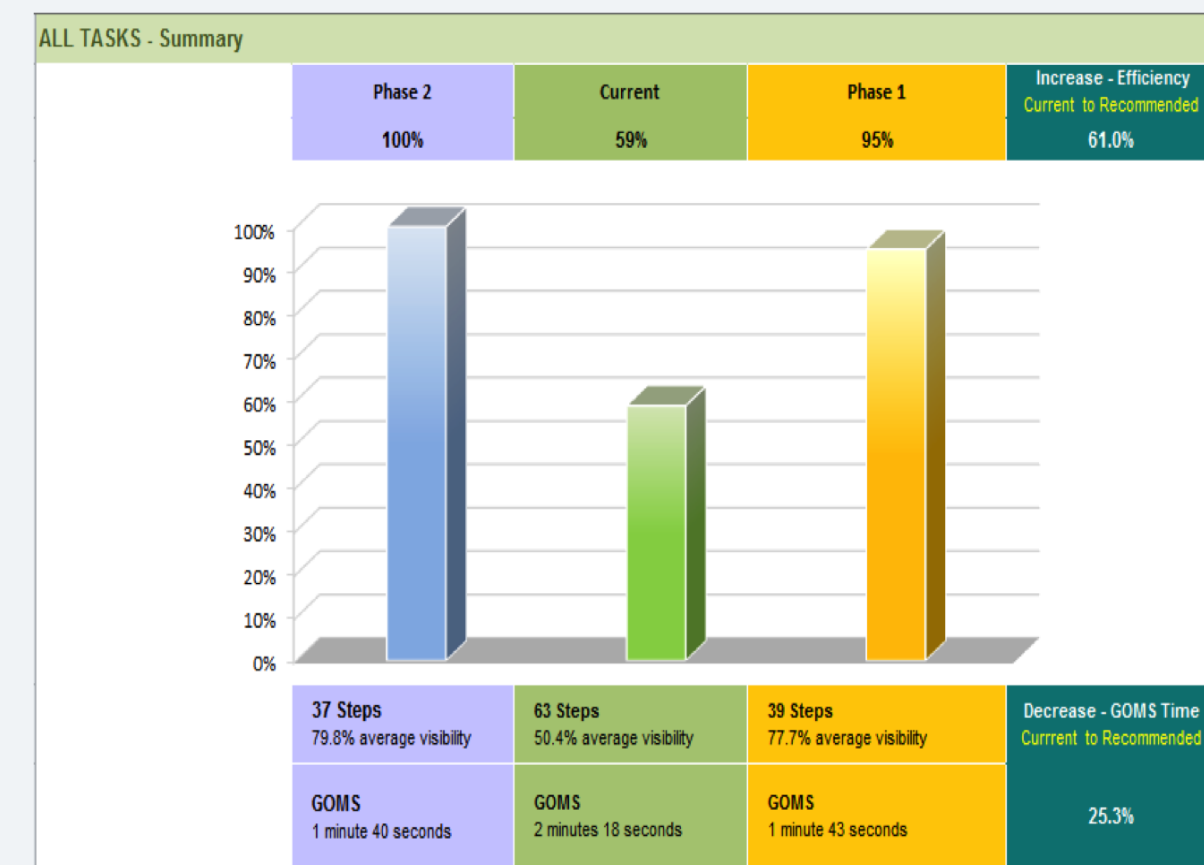
Essential Efficiency $EE = 100 \cdot \frac{S_{essential}}{S_{enacted}}$

Measures the efficiency of user steps (intention/action) of a use case or task as a ratio of the essential length (simplest, most straightforward interaction) to the actual enacted length

Task Visibility $TV = 100 \cdot \left[\frac{1}{S_{total}} \cdot \sum_{\forall i} V_i \right]$

Where,
 V_i = feature visibility (0 to 1) of enacted step i
 S_{total} = total number of enacted steps

Measures the fit between:
 visibility of features and the capabilities needed to complete a set of tasks




PLANNING - Due Diligence

In order to “hit the ground running”, the tiger team must be well prepared.


The tiger team lead should obtain the following pre-kickoff information:

- Customer’s vision
- Customer’s KPI’s, criteria and measurements of success
- Operational statistics for 2 months (recent)
- Documentation pertaining to the current system:
 - Business Process flows
 - System Architecture (including interfaces to external systems)
 - Data Model
 - Screenshots



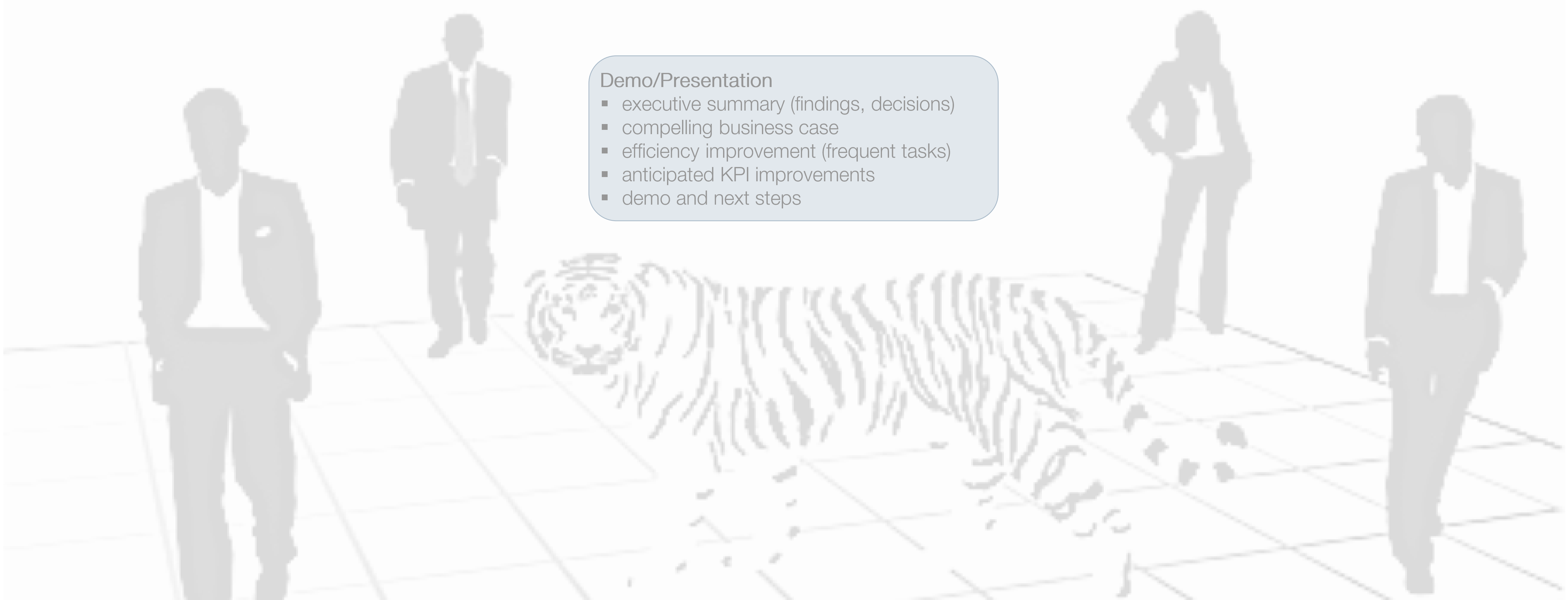
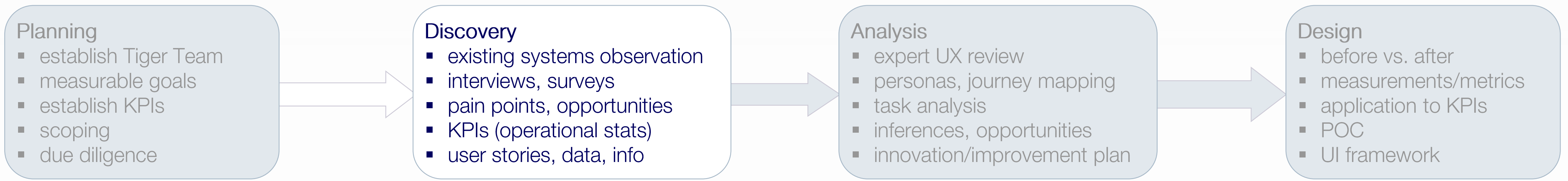
Customer
Input

-
- Updated analyst articles and studies of the domain, players, technologies, trends
 - Reference implementation and/or case studies (Collateral)
 - UX survey or a comparative competitor analysis of the major competitors
 - UX review **of current system**
 - **Applicable templates (*showcased in this deck*)**



Persistent
Input

PAS PRESALE METHODOLOGY – Planning



DISCOVERY - Operational Statistics

You can't control what you can't measure – Tom DeMarco

Operational Statistics for Healthcare [NAME]														
	JANUARY				FEBRUARY				Week over Week		Benchmarks		Targets	
Patient Access Services - Agent	Final Results	Call Trnsfr	Repeat Call	AHT secs.	Final Results	Call Trnsfr	Repeat Call	AHT secs.	Monthly % Change	Direction	4 Week Rolling Avg.	12 Month Avg.	Budget	% of Budget
Schedule Appointment	1,583	47	22	324	1,337	47	22	324	6%	▲	207	n/a*	718	3%
Register Patient	775	28	17	856	1,334	28	17	856	7%	▲	97	551	240	7%
Post Discharge Follow Up	731	13	89	219	932	13	89	219	25%	▲	150	633	343	26%
Register for Weight Loss Program	182	25	98	722	1,000	25	98	722	106%	▲	49	298	501	20%
Second Opinion Management	152	49	152	1,129	1,473	49	152	1,129	-60%	▼	31	n/a**	283	54%
Disease Management	480	223	480	1,326	2,407	223	480	1,326	-8%	▼	95	n/a***	251	191%
Total Units	3,903	385	858		8,483	385	858		12%	▲	628	494	2,336	37%
Task Completion Rate	6.15%				4.66%				-11%	▼	4.50%	5.10%	5.00%	0%
Patient Self Service														
First Time Use	198,544				2,854				12%	▲	32,337	202,871	140,000	0%
Returning	402,397									▼	85,655	254,430	136,000	0%
Total Total Self-Service Transactions	600,941										117,991	457,301	276,000	0%
Customer Experience Value Management														
Unique Site Visitors	3,148,957										822,725	3,547,294		
Total Page Views	48,805,456										9,786,528	43,463,231		
Self-Service Conversion Rate	19.08%										14.33%	11.99%	11.00%	0%
Top 5 Call Drivers														
Schedule Appointment	77,163				95,145				-82%	▼	19,107	83,230	62,584	0%
Care Coordination (Complex)	63,914				53,626				44%	▲	12,980	44,105	15,564	0%
Register for Program	34,812				26,868				4%	▲	6,753	16,302	7,500	0%
Bill Query	12,773				9,985				3%	▲	2,433	9,611	9,520	0%
Post Discharge Follow Up	9,486				7,610				58%	▲	1,879	8,051	5,135	0%
Top 5 Site Performance Metrics														
404 Error Pages %	0.90%				0.08%				0%	▲	0.07%	0.26%	0.75%	7%
500 Error Pages %	0.40%				0.29%				-36%	▼	0.41%	0.34%	0.75%	36%
Total Error Pages %	1.35%				0.12%				-4%	▼	0.51%	0.45%	1.50%	30%
Trouble Tickets (open)	177				4,887				10%	▲	58	57	32.00%	22%
Trouble Tickets (closed)	340				183				-22%	▼	17	6	54.00%	17%
HomePage Availability	99.87%				99.49%				0%	▲	99.93%	99.95%	23.00%	433%
HomePage Performance (in seconds)	4.88				4.38				-9%	▼	4.30	4.12	34.00%	1288%

Fictitious Sample!

DISCOVERY - Requirements (user stories)

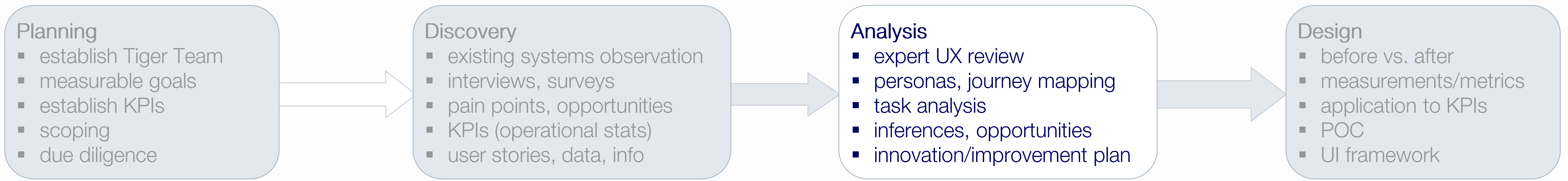
User Stories for [Project Name]

ID	As a... <i>persona</i>	I want to... <i>goal</i> [action...join...predicate]	so that I can... <i>reason</i>	Bus./ Funct. Area	Priority	Status	Opportunities, Design Notes	Acceptance Criteria [given...when...then]
US_001								
US_002								
US_003								
US_004								
US_005								
US_006								
US_007								
US_008								
US_009								
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US_022								

We elicit from the customer a manageable set of frequent scenarios per persona, where a scenario typically consists of several user stories (business functionality).

User stories are fleshed out (narratives between the user and system) for purposes of project management, dependencies, relationships, interaction design, and system responsibilities

PAS PRESALE METHODOLOGY – Planning



DISCOVERY - UX Reviews, User Satisfaction, Interviews & Surveys

Expert UX review of current system: heuristic, diagnostic, interaction, visual ...

What works, what doesn't work, what would you do differently?


Subjective agent satisfaction survey – *industry standard*

UX Review for [Healthcare Name] [Application Name] [Date]		Category	Priority	Severity
UX Issues	Recommendation			
Monitors from ceiling, but more promotional as opposed to informational so as not to distract	White noise is relaxing helps keep the volume down	Work Environment	na	na
Call center sectioned by function: * Patient Care * Admin * Tech Support * Billing/Insurance		Work Environment	na	na
Standard monitor size & resolution: 15" at 1024 X 768 (4:3), but plans are underway to change to HD (16:9) * For highly skilled users, extending to an extra screen should be an option for example: Dashboard view on the main screen and patient info on the extended screen * One very skilled agent used 1152 X 864 with great results and this resolution should be an option	Ensure responsive design. Design for the lowest common denominator Design to scale from 4:3 to 16:9		High	Medium
Agents are in the habit of putting callers on hold, while they do the necessary research. While this is often unavoidable, time spent researching is application centric. It is desirable to integrate systems such, that agents will see what they need and when they need it - for example, instead of launching an app to research plans, these plans should be displayed intelligently as part of a guided flow (process) based on business rules, compatibility, eligibility, patient history, etc., with a robust means to filter and compare plans. In this way, research time is integrated into the patient centric experience	Agents must see the data, information, options and action relevant to the task at hand - no more and no less. Ensure and content in context, and ensure the system leads the user			
OPS is helpful for novice agents (and should be further developed), but it can be intrusive, especially for experienced agents in that if it is closed, it minimizes other apps. Software Defect	Fix the defect			
A consolidated 360 degree view of patient is desired.	Ensure app is patient and user centric (not application) and that it is action driven as opposed to data driven			

Healthcare Name Call Center	Client Care Representatives																			
Location	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Agent experience (months)	48	36	38	36	38	72	55	26	15	44	48	47	24	9	24	44	36	84	36	2
Software Usability Scale (SUS)																				
I think that I would like to use this app frequently	3	3	3	4	1	4	2	4	4	2	5	5	4	3	4	4	5	3	1	
I found the system unnecessarily complex	4	4	3	2	1	1	5	2	3	2	4	5	1	2	2	4	1	5	2	5
I thought the system was easy to use	3	3	2	5	5	5	2	4	5	3	2	5	5	3	4	5	3	3	3	1
I think that I would need the support of a technical person to be able to use this system	3	2	3	1	2	1	1	3	1	5	3	5	1	1	1	1	1	5	3	5
I found the various functions in this system were well integrated	3	4	3	4	5	3	3	4	3	1	2	5	5	4	2	3	3	5	3	2
I thought there was too much inconsistency in this system	5	3	2	1	1	1	3	2	2	3	5	1	2	3	3	4	3	3	3	5
I would imagine that most people would learn to use this system very quickly	2	4	2	5	5	1	3	4	5	4	2	5	5	5	4	2	4	5	3	1
I found the system very cumbersome to use	2	4	4	1	1	1	3	2	3	3	4	1	2	3	2	2	3	4	3	2
I felt very confident using the system	3	3	5	5	5	1	3	4	1	4	3	5	5	5	4	5	5	5	3	1
I needed to learn a lot of things before I could get going with this system	4	3	5	1	1	1	5	3	1	3	5	1	1	4	2	2	3	4	3	2
SUS Score																				
Current SUS TOTAL (%)	63.83%																			
Target SUS TOTAL (%)	80%																			
	7 above 80% 12 below 63% 11 between 63 - 80																			

ANALYSIS - Example Persona

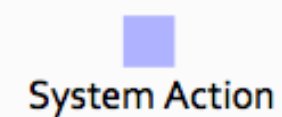
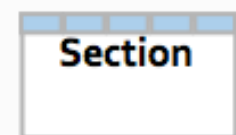
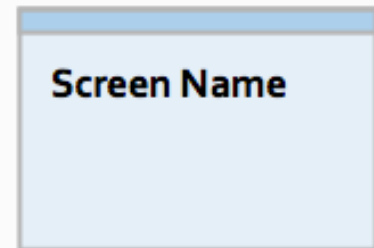
CTO Persona

Name: Gunther Spiegel		Brief Summary and Quotes		Recommendations
		<p>14 Year as CTO - background in finance and healthcare verticles</p> <p>Core Competencies</p> <ul style="list-style-type: none"> - broad and deep cross-functional experience with computing devices, software, cloud services & content. - Ability to look at things holistically/strategically - as well as in depth/tactically - Managing IT skills, qualifications and capabilities - Influencing and collaboration across all units <p>University of Michigan BGS, Computer Science, Mathematics, Economics</p> <p>Quote: "How can I influence the board in ways which IT can drive success for the company through the delivery of digital products?"</p>		<p>Persistent's Digital Transformation solution:</p> <ul style="list-style-type: none"> - improve operational efficiencies - maximize automation and streamlining - machine to machine (M2M) - Ensure seamless omnichannel experiences - Incorporate Cloud Computing and Big Data in solution - Manage Business change and improvement - Establish Plaform and APIs - Adapt to mobile workforce
Role:	CTO	Main Goals and Responsibilities	Pain Points	Top 3 Business Priorities
Age:	48	<ul style="list-style-type: none"> • Drive Product & Platform initiatives 	1 Need to enhance effectiveness and efficiency through technology	<p>Grow Revenue Weight 25%</p>
Gender:	Male	<ul style="list-style-type: none"> • Define & optimize customer lifecycle by offering quality software 	2 Need to inspire the Engineering and Product teams by creating synergy through product advancements and use of the latest and greatest technologies	<p>Improve Customer Experience Weight 30%</p>
Experience:	8 years Banking 15 years Healthcare	<ul style="list-style-type: none"> • Drive new business growth through greater advocacy and reference-ability 	3 Not well prepared for IoT Data explosion	<p>Better Compliance with Requirements Weight 15%</p>
Work Environment:	50% travelling and engaging customers	<ul style="list-style-type: none"> • Creating and lead the company's technology vision, strategy, direction, and delivery 	4 Talent is the single biggest issue standing in the way of achieving objectives	Top 2 Technology Priorities
Education:	BGS (Computer Science, Mathematics, Economics)	<ul style="list-style-type: none"> • Ensure collaboration and adoption across the company 	5 Need to make security an organizational effort	<p>Improve use of data & analytics Weight 35%</p> <p>Improve security & privacy capability Weight 25%</p>

ANALYSIS – Interaction Design

Stencil (copy/paste)

[NAME] Task/Screen Flow



Comments, Notes

Scenarios consist of several tasks joined together – for example, “schedule appointment for Mrs. Jones” may consist of, “find Mrs. Jones”, “Check her insurance”, “check doctor’s availability”, etc.

Scenarios/tasks are modeled in a task flow including:

- Screens/Screen Sections
- User Actions
- System Actions & Resulting Displays
- Decision Points\
- Comments

Scenario/task flows inform wireframe design

FEATURES OF PAS AT A GLANCE

- Patient registration

- Patient search

- Patient 360 longitudinal view

- Appointment scheduling

- Referrals

- Pre-admission /post discharge communication

- Disease management programs

- Second opinion management

- Issue management and query support

- CTI integration with ACD, IVR support

- PAS Process templates

- Performance/Quality metrics

- HIPAA compliant

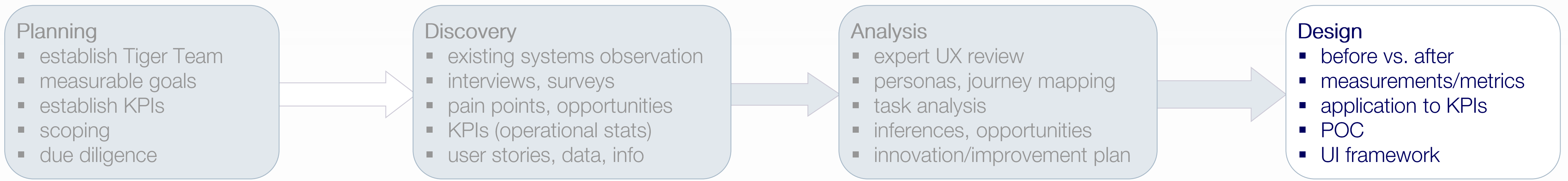
- Omni-channel engagement

- EMR integration

- Inbuilt Physician matching tool

- Knowledge support

PAS PRESALE METHODOLOGY – Planning



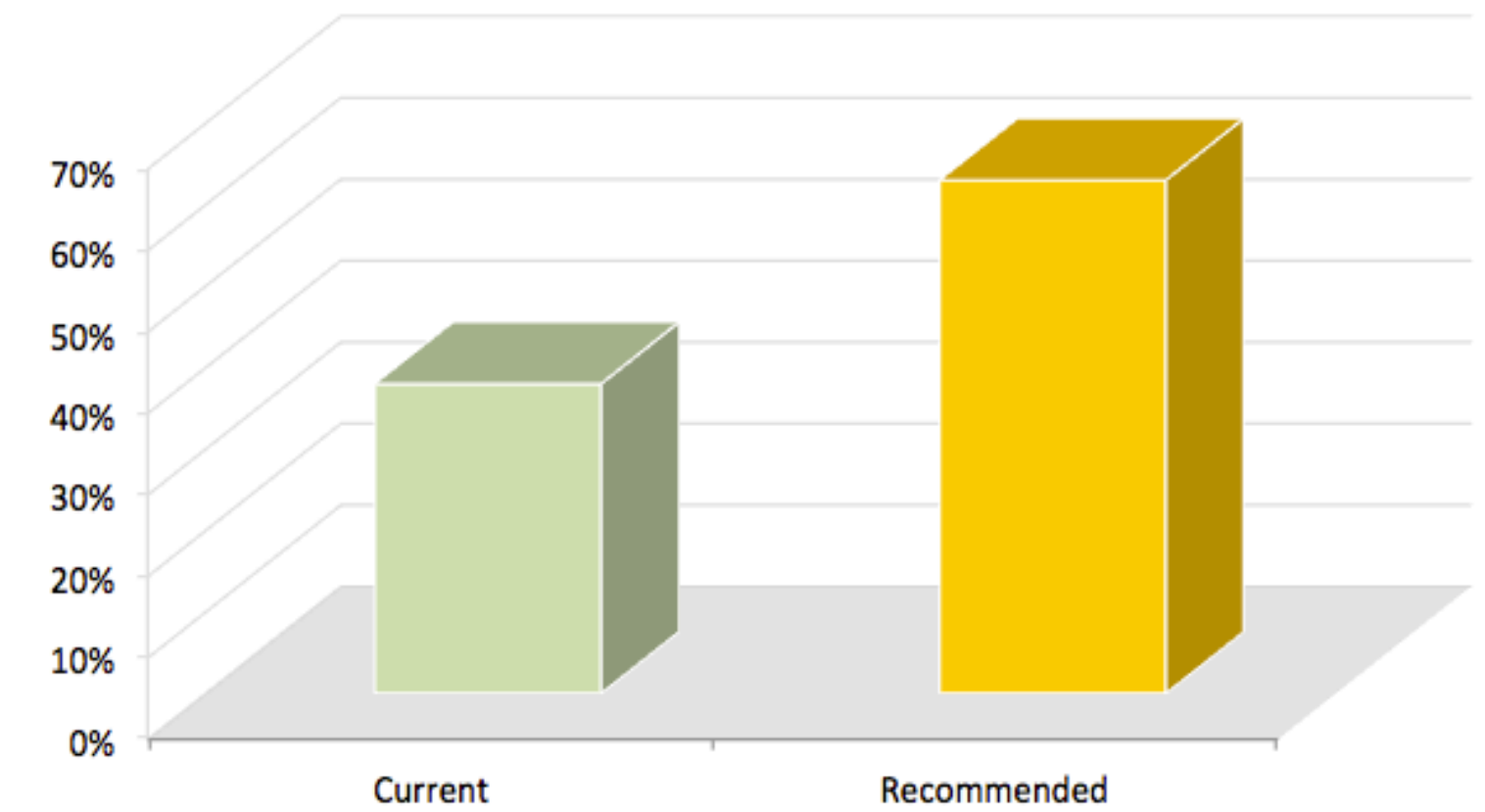
THE COMPELLING UX CASE

Demonstrate the measured efficiency improvements between customer's current vs. recommended solution

Apply the measured efficiency improvements to the relevant customer's KPI (*Average Handling Time, First Call Resolution, etc.*)

Calculate the overall efficiency improvement by referencing the customer's operational statistics (*volume, time, etc.*)

Create Case	Current	Recommended	Increase - Efficiency Current to Recommended
	38%	63%	65.8%



1. Measure the efficiency of the 3-5 most frequent end-to-end tasks for each persona
2. Use the customer's measurements of success
 - ✓ Key Performance Indicators (KPIs)
 - ✓ Key Result Areas (KRAs)
3. Use the customer's operational data – *for example, average time for an agent to create a case*

TASK EFFICIENCY - *Example*

The following task efficiency study is based on the screen captures on slides 52 to 57 and relates to the following scenario:

Jane Doe has been referred by her PCP to *Be-Healthy* hospital for a specialist appointment due to a positive blood test result.

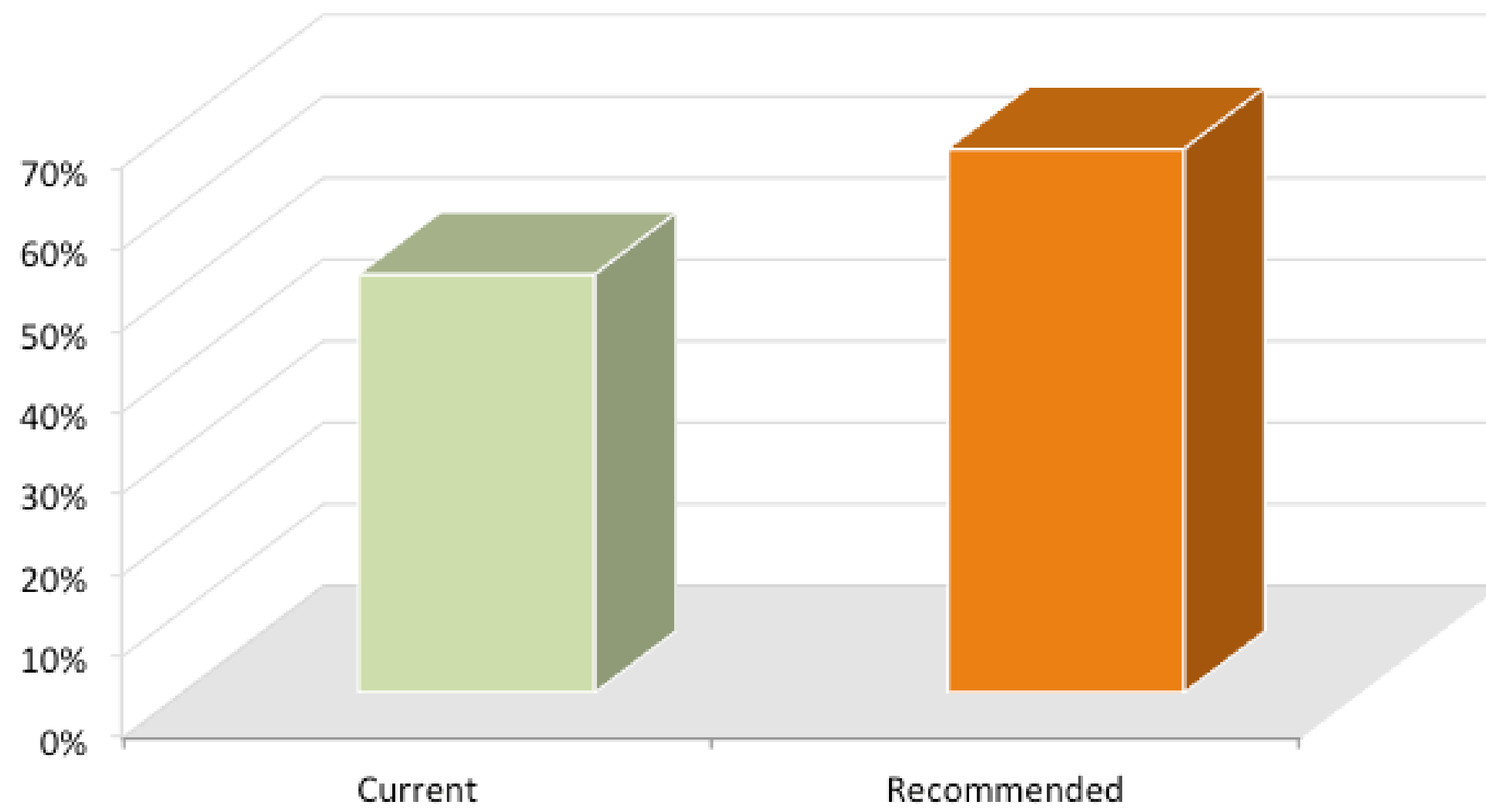
Her PCP gave her the phone number of *Be-Healthy*, the name of the specialist and sent her a report by email that she needs to forward to *Be-Healthy*

A seasoned agent completes this scenario in 5 minutes

Frequent Task	Essential Task (Control)	Tvis	Current Implementation	Screens	Tvis	Recommended Solution	Screens	Tvis
Search, New Patient, Create Task, Attach Document								
	PAS Home		PAS Home			PAS Home		
	PCP sends a new patient request with attached report to Healthcare organization		1. Click on Menu drop down		0.5	1. Agent enters patient first name and last name in global search		1.0
	1. Agent clicks on " New Patient" from email (next to the link of Incoming emails)	0	2. Select Patients		1.0	2. Agent clicks search		0.0
	2. Agent populates 4 required field	1	Patient List			System does not find patient and fronts New patient with Name and Last Name populated		
	3. Agent clicks attach document	0.5	3. Click Sort by name		0.5			
	System identifies attachment and retrieves		4.Click New Patient		0.0			
	4. Agent selects Save and Create Task	0.5	New patient form					
	5. Agent populates 3 fields 3 steps	3	5. Populate Required fields (Name, First Name, Last Name, DOB, Phone) 5 steps		5	3. Populate required fields 2 steps		2.0
	6. Agent clicks create	1	6. Click Save		0	4. Click Save		0.0
	Patient Page		Patient Page			Patient Page		
			7. Click New Task		0.0	5. Open New task expandable section		1.0
			New Task Page					
			8. Populate 3 fields (other fields are autopopulated by the system)		1.0	6. Populate 3 fields (other fields are autopopulated by the system)		1.0
			9. Click Create		1	7. Click Create		1.0
			10. Click File		0	8. Click "Attach File from Computer"		0.0
			11. Click Upload file from your computer		0.5			
			12. Click choose file ... (OS browse...)		0.5			
			13. Select file		1.0	9. Select File		1.0
			14. Click OK		1.0	10. Click OK		1.0
			15. Click on Main dropdown menu		0.5			
	7. Select PAS Home	0	16. Select PAS Home		0.0	11. Click Home icon		0.0
	AT This point, agent is back in PAS Home		AT This point, agent is back in PAS Home					
Total User Steps	8		20			12		
Essential Efficiency (EE)	100.0%		40.0%			66.7%		
Task Visibility (TV)	75%	6	62.5%		12.5	66.7%		8.0
Repeat. Screens			2			0		
Unique Screens			5			2		
Total Systems			1			1		
Overall Efficiency	88%		51.3%			66.7%		
Efficiency Increase			NA			30.1%		
Applicable KPIs								

TASK EFFICIENCY – *Efficiency Increase*

New Patient, Task, Attachment	Current	Recommended	Increase - Efficiency Current to Recommended
	51%	67%	30.0%



THE COMPELLING UX CASE - *EXAMPLE*

The high frequency end-to-end scenario: ***search + create patient + create task + attach document***

Currently takes agents an average of: → 5 minutes (300 seconds)
not including 140 seconds system processing time

Recommended UX solution is 30% more efficient: → 3 minutes & 47 seconds (231 seconds)

Therefore, seconds saved: → 69 seconds

This scenario is performed X 8,000 times a month → 9,200 minutes

X average cost/minute of inbound handle time → \$ 1.03

savings for 1 month = \$9,476

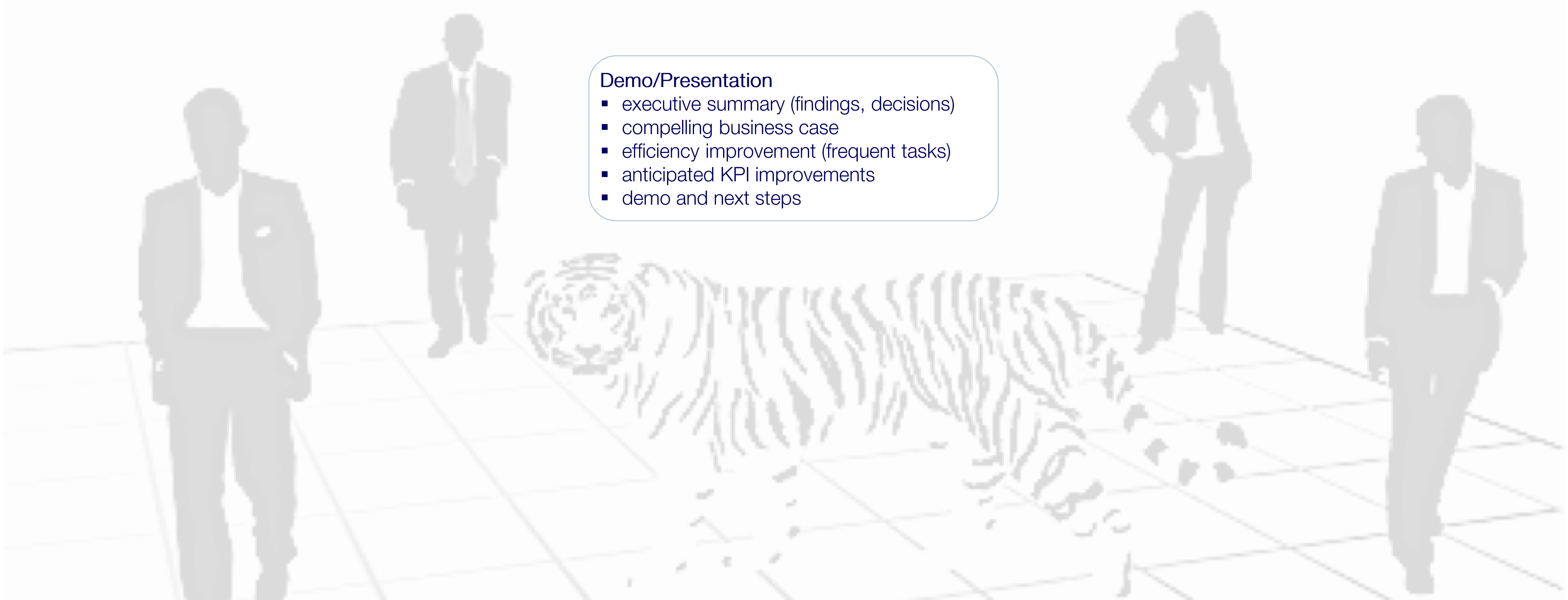
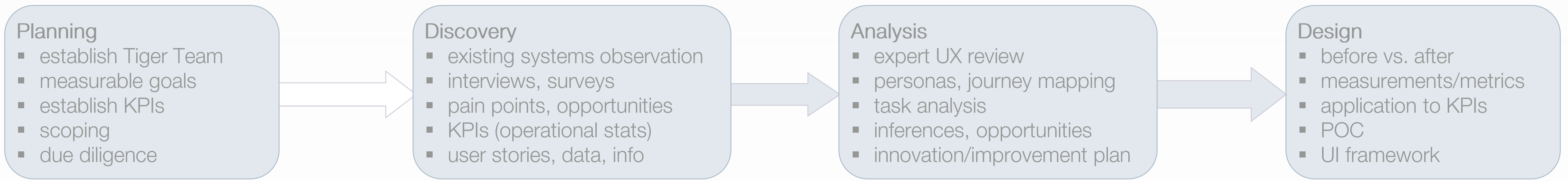
AND THAT'S JUST FOR ONE FREQUENT SCENARIO!



While wire-framing is an iterative process, by employing best practices: discovery, diligence, competitor analysis, interaction design, task analysis and information architecture,

a higher degree of accuracy is achieved in significantly less iterations

PAS PRESALE METHODOLOGY – Planning



GUARANTEE OF OUR SUCCESS

We ensure the improvement of the customer's KPIs and measurements of success is our highest business priority that informs our design decisions and technology solutions

Our assessment of the customer's current solution is based on observation and diligence of actual users accomplishing their goals in the real world

Our recommended solution is based on industry standards and best practices including methods, patterns and artifacts: Agile (*Scrum*), *Design Thinking*, *Lean UX*, usability metrics, subjective study's etc.

User Stories, Persona Study, Journey Maps, Statistical Analysis, Task Flows, User Validation & Testing, Wireframes,

Persona specific scenarios of use consisting of multiple tasks are provided by the customer and validated (per operational statistics) to be the 5 to 10 most frequent tasks per persona

Our demonstrated KPI improvements are applied to the customer's operational statistics like volume of a particular task over time, agent cost per minute

KEY BENEFITS

- Vast improvement in call response and routing times
- Consolidated patient 360 view provides actionable data to ensure quality care is delivered to patients
- Increased access to patients lead to more options and they are more likely to stay within provider network.
- Visible improvement in patient satisfaction leading to better retention/less churn
- Reduction in readmission counts and referral “no-shows”/leakages.
- Centralized scheduling improves the productivity of POAs/physicians resulting in more patient visits to PCPs.
- 24x7 Nurse Triage helps ensure patients do not go to urgent care often causing a reduction in ED visits
- Effective Physician Liaison Program to get more referrals from external physicians
- Participation in Shared Services Program or Bundled Payment Programs which are managed by Technical solutions
- Tangible impact on provider bottomline

UX Requirements *(proposed)*

General

- The UX solution is elicited by observing actual users (personas) accomplishing their goals in the real world
- The UX design is compliant with industry standards and is consistent with best design practices including methods, patterns and artifacts
- The front-end scales to include new functionality without compromising UX integrity
- UX Design deliverables are reviewed, iterated as required, validated and approved by users
- Employ alerts and indicators where possible
- Support global search capabilities and autocomplete
- Scrolling one page at a time vertically (mapped to up and down arrows) and paging horizontally (mapped to left and right arrows)
- Horizontal pages are separate pages

Modular Design

- The UX design framework consists of a platform and reusable modules located in a module library
- UX modules are interaction design patterns containing visualized data and actions
- Modules are pre-integrated with each other
- Modules can be modified by adding, removing and/or hiding data and/or actions
- Personalization is supported with respect to moving modules around the screen

Visualization

- Optimal scannability between and within screen components/modules
- The UX design is compliant with accessibility requirements (ADA, W3C, ISO)
- Visual guidance (clear visual affordances, indicators, states, defaults and prompts)
- UX visualization will conform to a branding style guide and guidelines

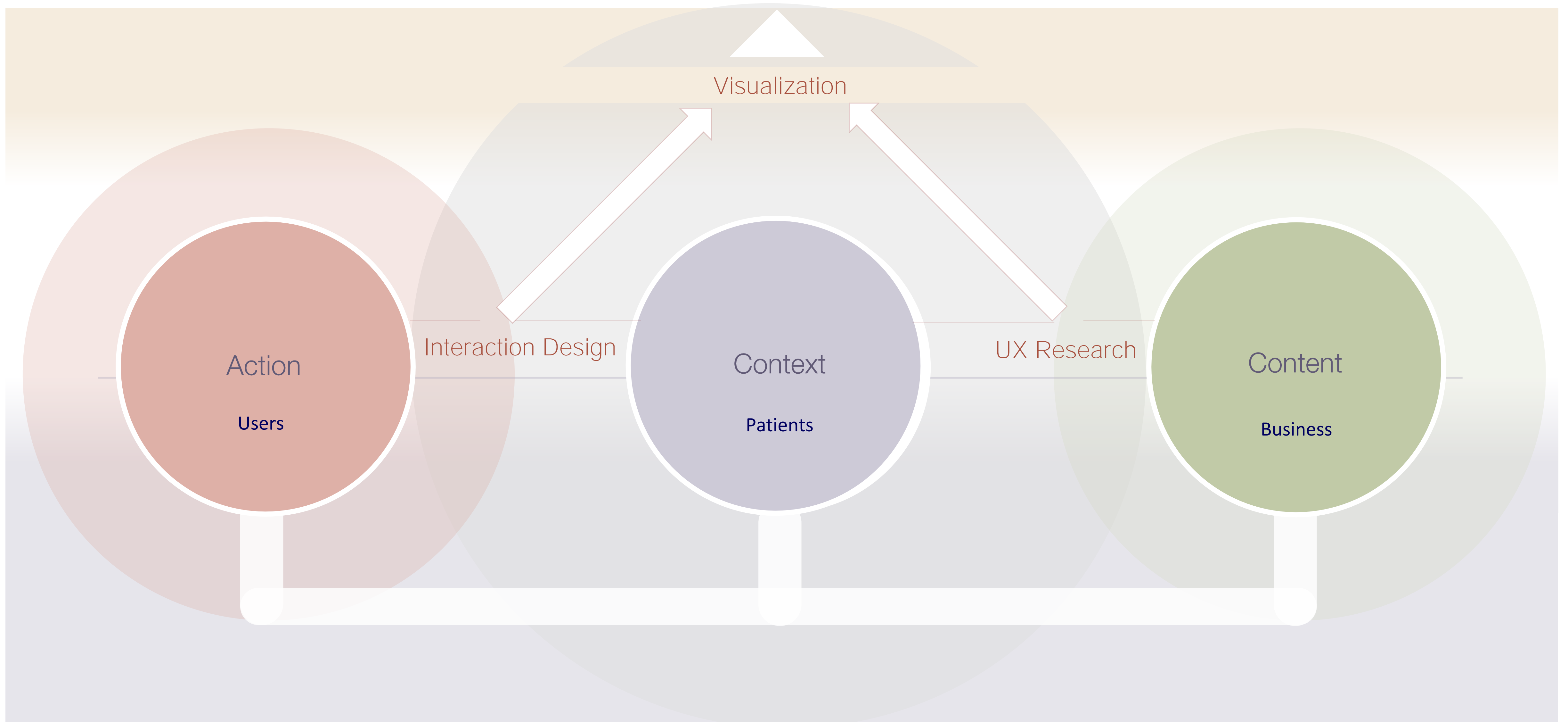
UX Design Heuristics

- Context: People (users and patients) centric **as opposed to application centric**
- Task driven **as opposed to data driven**
- Meaningful actions in context
- WYSIWYN (What You See Is What You Need) - when and where needed
- Approximate the real world
- Design for the probable case of use (provide for the possible case of use)
- Optimized flows
- Knowledge in the system (automation, pre-filtering, business rules)
- Simplicity (shortest most direct path of least resistance)
- Explicit and unambiguous
- Error prevention

UX Orientation

At all times I must know by just looking:

Where I am (**context**), where I can I go (**navigation**) what I can do (**content & actions**), how I do it (**affordance**)





■ **THANK YOU!**
XDesign Consulting