

DESIGN PROCESS CASE STUDY

SHOWING THE DESIGN PROCESS FOR GE OIL & GAS E COMMERCE PORTAL

THE PREMISE

- A GE OIL & GAS HAS IDENTIFIED THAT THEY DO NOT COMPETE WELL IN THE OIL & GAS EQUIPMENTS AND PART SALES.
- I BRING THE TEAMS TOGETHER TO EXAMINE THE OPPORTUNITY.
- FOR THIS PRESENTATION, WE WILL LOOK AT HOW THE E COMMERCE SITE GETS DESIGNED.

MARKET WORKSHOPS

- MARKET RESEARCH
- DESIGN THINKING WORKSHOPS
- ETHNOGRAPHY AND CONTEXTUAL STUDIES

MY UX TEAM HOSTS A 3-DAY DESIGN THINKING WORKSHOP.

DURING THE WORKSHOP THEY EVALUATE THE FOLLOWING:

- WHAT IS THE REAL PROBLEM WE ARE TRYING TO SOLVE?
- WHAT IS THE BEST APPROACH TO ADDRESSING THE GAP?
 - SELL EQUIPMENTS, PARTS, CONNECT WITH SALES?
- IF WE SELL, WHAT ARE OUR CUSTOMERS LOOKING FOR?
- HOW CAN WE BRING NEW CUSTOMERS INTO THE BRAND WITH THIS OFFERING?

RESULTS OF THE WORKSHOP

INTENT: SALES

PROBLEM STATEMENT: OUR OFFERINGS UNDERSERVE THE GROWING OIL & GAS PARTS MARKET.

HILLS

1. AS A OIL & GAS COMPANY, WE CAN EASILY ORDER PARTS BUT WE CAN NOT APPE TO FOLLOW WITH SALES PEOPLE.
2. AS A OIL & GAS COMPANY WE LIKE TO UNDERSTAND OUR DISCOUNTS AND HOW TO ORDER PARTS OR EQUIPMENTS AND FOLLOW THE ORDER TILL WE RECEIVED IT.
3. AS A OIL & GAS COMPANY WE LIKE TO HAVE A CLARITY ON OUR ORDERS AND FOLLOW THE SHIPMENTS, AND KNOW THE LEAP TIME TILL PARTS BE MANUFACTURED AND RECEIVED..

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- THIS ISN'T A LIST OF WHAT FEATURES MAKE UP A E COMMERCE.
- **IT IS THREE STATEMENTS THAT SPECIFY THE PERSONA, PROBLEM, AND HOW THEY WILL MEASURE THE SOLUTION.**
- THE FEATURES ARE DERIVED FROM WHAT PROBLEMS HAVE BEEN IDENTIFIED TO SOLVE HERE.

LET'S LOOK CLOSER AT THESE HILLS

RUNWAY RESEARCH

- DESIGN THINKING WORKSHOPS
- JOURNEY MAPS
- STAKEHOLDER REVIEWS
- HILLS WRITING

THE UX AND PRODUCT TEAMS TAKE THE HILLS AND BEGINS DOING SPECIFIC RESEARCH TO DEFINE THE KEY CAPABILITIES THAT WILL DEFINE THE E COMMERCE SITE NEED TO BE BUILD.

FOR THE PURPOSES OF THIS EXAMPLE WE WILL FOCUS ON THE EASE OF ACCESS HILL.

THE TEAMS:

- CONDUCT MORE SPECIFIC DTWS
- CREATE AND VALIDATE USER JOURNEYS
- WRITE MORE SPECIFIC HILLS IN THE CONTEXT OF THE MARKET HILLS

HERE'S ONE OF THOSE EPIC HILLS:

- **AS A FAMILY OF SCHOOL AGE CHILDREN, I CAN LOAD CHILDREN IN AND OUT OF THE VEHICLE WITH MINIMAL EFFORT QUICKLY AND SAFELY.**

THIS HILL IS TAKEN FORWARD INTO THE PLANNING STAGE AS A KEY CAPABILITY TO FOCUS ON EARLY.

THE TEAM ALSO NEEDS TO BREAK THIS FEATURE DOWN INTO FEATURES AS DEFINED BY USER RESEARCH AND FURTHER DISCUSSION.

FOR THIS EXERCISE WE WILL USE THIS CAPABILITY HILL:

- **AS A OIL & GAS COMPANY WE LIKE TO UNDERSTAND OUR DISCOUNTS AND HOW TO ORDER PARTS OR EQUIPMENTS AND FOLLOW THE ORDER TILL WE RECEIVED IT. THIS IS FURTHER BROKEN DOWN TO FEATURES FOR RELEASE PLANNING. WE WILL USE THIS FEATURE:**

NOTE THERE'S A LOT IMPLIED HERE.



AGAIN, AS HILLS, THESE ARE
PROBLEM STATEMENTS, NOT
FEATURE LISTS.



FOCUSING ON PROBLEM
STATEMENTS PUTS THE FOCUS
DIRECTLY ON THE USER, NOT ON
WHAT WE THINK WE KNOW.

TAKEAWAY

PLANNING

- STORY WRITING
- SCOPE ALIGNMENT
- RALLY PLANNING
- SCHEDULE PLANNING

THE FEATURE HILLS ARE BROKEN DOWN INTO USER STORIES TO DEFINE WHAT IS IN AND OUT OF SCOPE FOR THAT FEATURE.

USER STORIES IN SCOPE:

1. **ASSIGNED A SALES PERSON WITH HI INFO TO THE CLIENT.**
2. **WHO I CAN TALK TOO IN GE OIL & GAS.**
3. **IS PART COME IN PACKET OF 2 OR ITEMIZED.**
4. **PARTS AVAILABLE OR NEED TO GET A QUOTE.**
5. **PARTS LEAP TIME.**

USER STORIES NOT IN SCOPE

1. **APPLYING COMPANY DISCOUNT IN BULK ORDERS.**
2. **INTRODUCE A QUOTE TO CLIENT AND LEAP TIME TO MANUFACTURE THE PARTS.**

THESE STORIES ARE SIZED, AND THE TEAM CREATES THE TIMELINE WITH DEPENDENCIES TO STAGE OUT DESIGN AND BUILD PROCESSES ON AN AGILE TIMELINE. "4 MONTHS" TO RELEASE MVP1

EXPLORE

- WIREFRAMES
- SURVEYS
- WORKFLOW REVIEWS

WITH THE USER STORIES DEFINED, THE DESIGN TEAM DIGS INTO THE DETAILS OF EACH DESIGN. WORKING OUT THE DETAILS AND REQUIREMENTS THAT WILL MAKE EACH DESIGN MOST SUCCESSFUL.

THE DESIGN TEAM CREATES LO-FI PROTOTYPES TO SHOW CUSTOMERS AND REVIEW WITH STAKEHOLDERS.

SOME REQUIREMENTS THAT CAME TO LIGHT INCLUDE:

- ENTERING THE GE PART NUMBER AND THE CLIENT PART NUMBER TO MATCH..
- FOR ORDERING BULK
 - MUST DESIGN A SPREAD SHEET TO MATCH THE CLIENT REP SYSTEM
 - ALLOW THE SYSTEM TO BE COMPATIBLE WITH CLIENT REP SYSTEM
- THE DESIGN LANGUAGE FOR THE E COMMERCE SITE ALLOW CLIENTS TO ORDER MORE TO GET MORE DISCOUNT.
- CUSTOMERS PREFER FOLLOWING THE ORDER.
- PRESENT A BUCK UPLOAD AND SINGLE UPLOADS.
- SHOW THE LEAP TIME AND LONG IT WILL TAKE TO REVIVE IT.

WITH THESE (AND OTHER) INSIGHTS IN HAND, THE TEAM CAN MOVE TO THE HIGH-FIDELITY DESIGN PHASE.

NOW WE GET SPECIFIC

- NOW THAT WE KNOW THE CONTEXT AND THE PROBLEM, THE SOLUTION IS GIVEN DETAILS THAT ADDRESS THOSE PROBLEMS DIRECTLY IN THAT CONTEXT.

DESIGN

- MOCKUPS
- PROTOTYPES



AT GE OIL & GAS.

THE DESIGN TEAM WORKS WITH THEIR DESIGN LANGUAGE AND OTHER STAKEHOLDERS TO CREATE A FULLY REALIZED MODEL AND DESIGN BOTH IN COMPUTER RENDERINGS AND PHYSICAL PROTOTYPES.

THESE PROTOTYPES WILL BE USED IN MARKET RESEARCH AND USABILITY TESTING.

VALIDATION

- USABILITY TESTING
- STAKEHOLDER REVIEWS
- FEASIBILITY REVIEWS

The screenshot displays the GE Oil & Gas dashboard with the following components:

- Header:** GE Oil & Gas logo, navigation links (Home, Products, Services, Industry, Solutions, About, Parts Store), and Qatar Gas logo.
- Top Row:** Date (Monday, 21 Jan 2017, 09:05:33 AM), Oil Prices (WTI \$34.81 ▲, Brent \$29.98 ▼), TBD (\$1.967 m Open/Pending, \$23.98 m Lost), Maintenance Status (27 Overdue, 9 Upcoming, 2 Complete), and Service Alerts (7 New, 15 Assigned, 17 Completed, 28 Action Rg).
- Drilling Status Table:**

	Previous	Due Date	Archived
Enotech	123456	New	
QP	123456	Booked	
Aramco	123456	In Production	
Petrotec	123456	Pending	
Enoteck	123456	Packed	
Tupras	123456	In Transite	
- Rig Count Table:**

	Previous	Due Date	Archived
Predix0099898		11/12/2017	
Predix0099767		23/01/2017	
Predix0099339		21/10/2016	
Predix0099001		27/06/2016	
Predix0099112		26/04/2016	
Predix0099111		21/03/2017	
- TBD Table:** Similar structure to Drilling Status.
- Wells Results Table:**

	Pressure Test	Due Date	Repairing
Qatar Gas	123456	Pass	
Qatar Gas	123456	Not Available	
Qatar Gas	123456	Fail	
Qatar Gas	123456	Pass	
Qatar Gas	123456	Not Available	
Qatar Gas	123456	Fail	
- Maintenances Table:**

Well	Customer	Date
NFQ6-8	Qatar Gas	06/04/2017
NFQ6-6	Qatar Gas	25/02/2017
NFQ6-11	Qatar Gas	21/06/2017
NFQ6-5	Qatar Gas	12/05/2017
NFQ6-3	Qatar Gas	15/01/2017
NFQ6-1	Qatar Gas	22/11/2016
- Installed Base View Table:**

	Region	Country	Customer	Part No	Ge Equipments	Site Equipments
2	East Med					
3	Bakistan					
4	Behrain					
5	Turky					
6	Saudi					
7	East Med					
8						
9						
- Inventory Status Details Table:**

	Region	Part No	Details	On Hand	Delivery Time	LeadTime	Origion
2	East Med	199595-32	Thrust Bearing Washer	11	20	147	Singapore
3	Gulf	199595-32	Thrust Bearing Washer	33	25	107	Singapore
4	Bakistan	199595-32	Thrust Bearing Washer	05	15	166	Italy
5	Turky	199595-32	Thrust Bearing Washer	09	29	199	USA
6	Saudi	199595-32	Thrust Bearing Washer	16	45	108	Australia
7	Behrain	199595-32	Thrust Bearing Washer	57	35	67	Singapore
8							
9							
- Documents Table:**

Job Summery Report	12
Images	3
Daily Report	10
GE Tree Rating	11
Product Specifications	43

THE FULLY RENDERED PROTOTYPES ARE TESTED WITH USERS, INDUSTRY EXPERTS, AND INTERNAL STAKEHOLDERS. FEEDBACK IS ALSO GATHERED ON TECHNICAL FEASIBILITY AND SOME COMPROMISES HAD TO BE MADE BASED ON TECHNOLOGY AND FACILITY ABILITIES. SOME FACILITIES WILL HAVE TO BE UPDATED AND THE PRODUCTION TEAM BEGINS TO EXPLORE THOSE UPDATES.

FEEDBACK IS GATHERED, AND TEST SCORES ARE CALCULATED. BASED ON THIS FEEDBACK, THEY MAY GO BACK TO THE EXPLORE OR DESIGN PHASE TO WORK OUT WHERE THEY MISSED THE MARK.

WHEN EVERYONE SIGNS OFF AND KPIS ARE ACHIEVED. THE DESIGN IS READY TO SPEC OUT AND HAND OVER TO THE PRODUCTION TEAM.

READY

- SPECS/REDLINES
- REVIEW WITH UI DEV
- REQUIREMENTS DOCS

The dashboard features a top navigation bar with the GE Oil & Gas logo and links for Home, Products, Services, Industry, Solutions, About, Parts Store, and Qatar Gas. A search icon is also present.

Monday, 21 Jan 2017, 09:05:33 AM

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Brent: TBD \$1.967 m \$23.98 m
Status: Open/Pending, Lost

Maintenance Status
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TBD

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THE DESIGN IS SPEC-ED OUT AND REVIEWED WITH THE PRODUCTION ENGINEERS. THE REQUIREMENTS ARE DETAILED, AND THE PRODUCTION TEAM BEGINS.

AS QUESTIONS ARISE, THEY CONFER WITH THE DESIGN TEAM TO MAKE SURE ANY NEEDED ADJUSTMENTS ARE WITHIN THE SCOPE AND SPIRIT OF THE DESIGN.

EPILOGUE

- THERE'S A LOT MISSING HERE, OBVIOUSLY.
- THE POINT TO TAKE AWAY HERE IS THAT USER FOCUSED DESIGN FROM THE VERY BEGINNING WILL RESULT IN
 - BETTER SOLUTIONS
 - HAPPIER USERS
 - MORE EFFICIENT GTM STRATEGY
 - ALL YOUR DREAMS WILL COME TRUE