

TOUCH IOT SWIMMING POOL MONITOR

open**SAP**



Story

My need and story.

Background

My company is West Coast Peninsula Pool Service. My customers are home swimming pool owners. I have contracts to service 40 swimming pools. My service is to keep each pool clean and the water chemicals at appropriate levels. I visit each pool once a week and spend nearly an hour on each pool. During the hot Southern California summers, a pool's chemical levels can get out of whack and I end up having to make multiple trips back to the same customer pool to get the pool cleaned and right mix of chemicals.

Process improvement

My goal is to improve the efficiency of weekly schedule and time spent at each pool by remotely monitoring chemical levels of each pool throughout the week. By remotely monitoring each pool daily I can service pools whose chemical levels are falling out of acceptable range and minimize the time needing to be spent "fixing" unclean pools.

Payoff

I believe I will be able to keep my customer's pools cleaner and my customers happier through remote monitoring. Through a more efficient system I hope to add additional customers to offset the cost of my pool monitors.

Persona



Todd

Owner / Pool Service Technician

“I like to fix a potential problem before it becomes a real problem”

About

- 54, married, 2 years of pool service experience.
- Being a one man band takes a lot of energy and commitment to my customers. If a pool becomes untidy it can ruin a customer’s pool plans and I could lose the customer
- Fast paced, a lot of time spent in my truck, need more hours in the day so I can service more pools
- I work alone, keep my customers happy, and hope for good references

Responsibilities

- I am responsible for keeping 40 pools running smoothly.
- I am responsible for purchasing of pool chemicals, maintenance of my truck, cleaning tools, monitoring of pool pump and filter
- I spend a day per week in office work: billing, advertisement, inventory, addressing customer questions.
- I recently purchased digital testing readers to test pool water on a daily basis

Needs

- I need to know an accurate condition of each of my customer’s pool water
- I want to easily view pool locations so I can better plan my routes
- Better planning for inventory and more accurate levels of product to load onto truck each morning

Main Goals

- Improve my customer’s swimming experience
- Efficiently service each pool by dynamically scheduling my service by pool needs
- Reduce the number of visits to the same pool during the same week
- Increase the number of pools I can service per week

Pain Points

- Pool that has lost its chemical balance.
- Customer complaint calls that pool isn’t in good shape.
- Multiple visits to same pool in same week




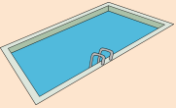

Point of View

As a Pool Service Technician

I need a way to monitor my customer's swimming pool water quality daily so that I can react quickly when a pool's water is beginning to lose its proper chemical levels.



User Experience Journey – Example: Pool that lost its water balance

<p>ACTIONS</p>	<ul style="list-style-type: none"> ➤ Pool Visit ➤ Arrive at customer 	<ul style="list-style-type: none"> ➤ Look over pool ➤ Begin tests 	<ul style="list-style-type: none"> ➤ Identify high amount of algae and filth 	<ul style="list-style-type: none"> ➤ Add chemicals, Vacuum and skim pool ➤ Take notes 	<ul style="list-style-type: none"> ➤ Pack-up ➤ Text status to customer 	<ul style="list-style-type: none"> ➤ Return to truck ➤ Revise week's schedule ➤ Go to next customer
<p>MINDSET</p>	<ul style="list-style-type: none"> ➤ Ready to work ➤ Want to get in and out ➤ This pool is going to sparkle! 	<ul style="list-style-type: none"> ➤ "How's it looking today?" ➤ Hoping for the best 	<ul style="list-style-type: none"> ➤ "YIKES!!" ➤ Algae build-up ➤ "My schedule is hosed!" 	<ul style="list-style-type: none"> ➤ "I am so far behind now" ➤ If only I had known the water quality 	<ul style="list-style-type: none"> ➤ "Gotta pick-up my pace" 	<ul style="list-style-type: none"> ➤ "It'll get fixed" ➤ "I hope next pool is OK"
<p>FEELING</p>						
<p>TOUCH POINTS</p>	<ul style="list-style-type: none"> ➤ Customer's house ➤ Clipboard ➤ Truck 	<ul style="list-style-type: none"> ➤ Swimming Pool water ➤ Vision ➤ Test Kit ➤ Pool pump 	<ul style="list-style-type: none"> ➤ Test Kit 	<ul style="list-style-type: none"> ➤ Test Kit, cleaning stuff ➤ Notepad ➤ Chemicals 	<ul style="list-style-type: none"> ➤ Supplies ➤ Phone 	<ul style="list-style-type: none"> ➤ Truck ➤ Notes



Prototype

Prototype screens for IoT Pool Service System



AquaCheck-400

50000101

Mapped Connected On

Todd

Pool - 15,000 gallons

pH level too low - Add pH increaser

July 4, 2017

pH level near low - caution

July 3, 2017

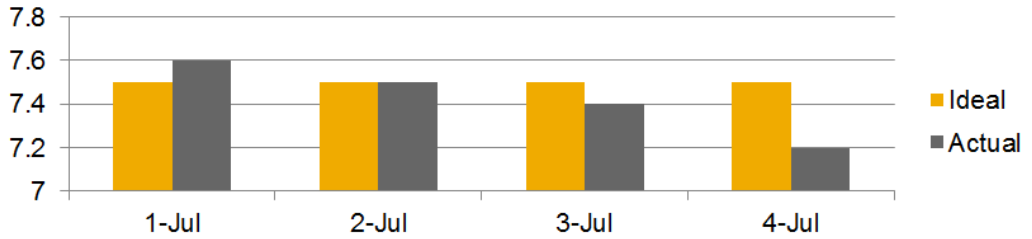
Alkalinity level near high - caution

July 4, 2017

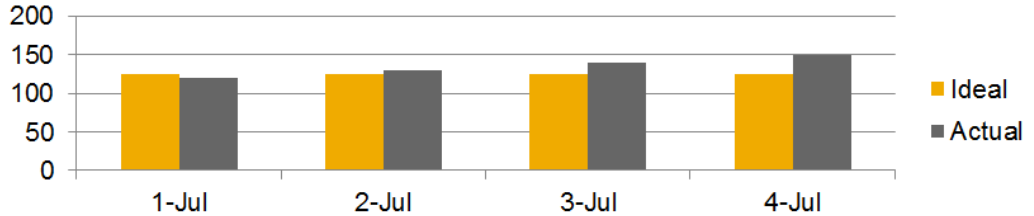
Chlorine level low - Add chlorine

July 4, 2017

Ideal pH Level: 7.4 to 7.6



Alkalinity Level: 100 to 150 ppm



Chlorine Level: 3 ppm

