

Software

HOW TO GO ABOUT DEFINING AN IOT SOLUTION...

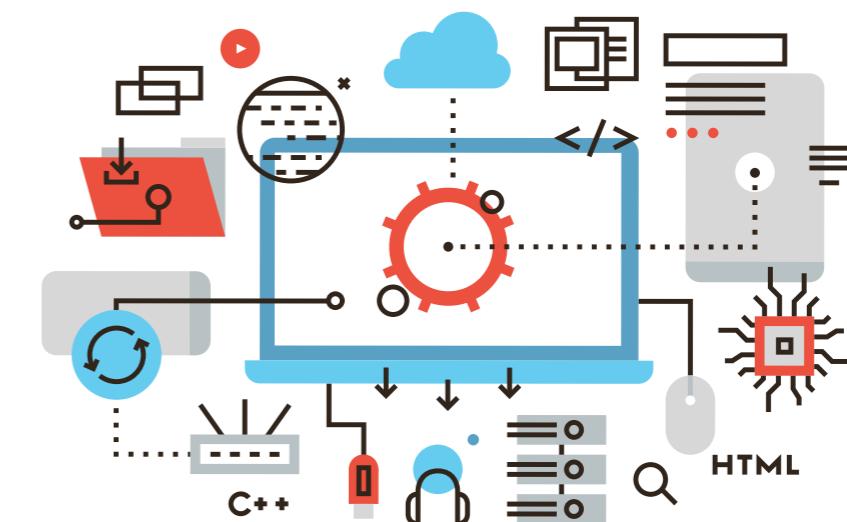
PRE-REQUISITES

Hardware or Software?
What comes first when designing a solution?

NEITHER!

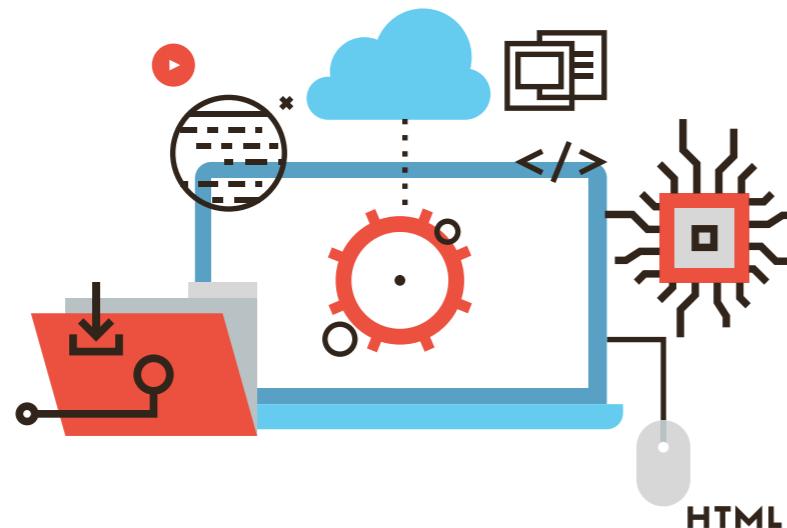


Research to identify
the problem



Study the overall
environment – Hardware,
Software, and Connectivity

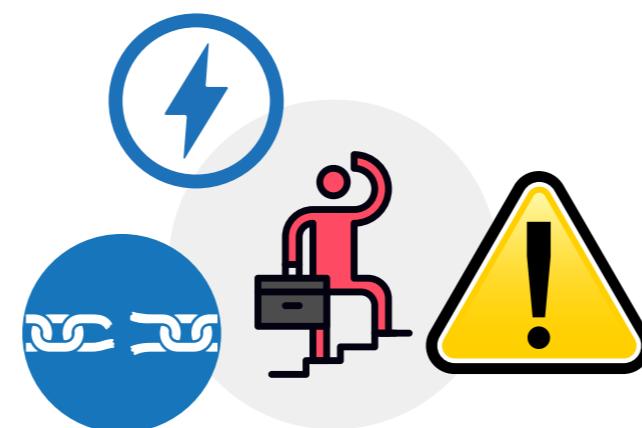
3 STAGES OF IDENTIFYING THE SOLUTION



Study the System



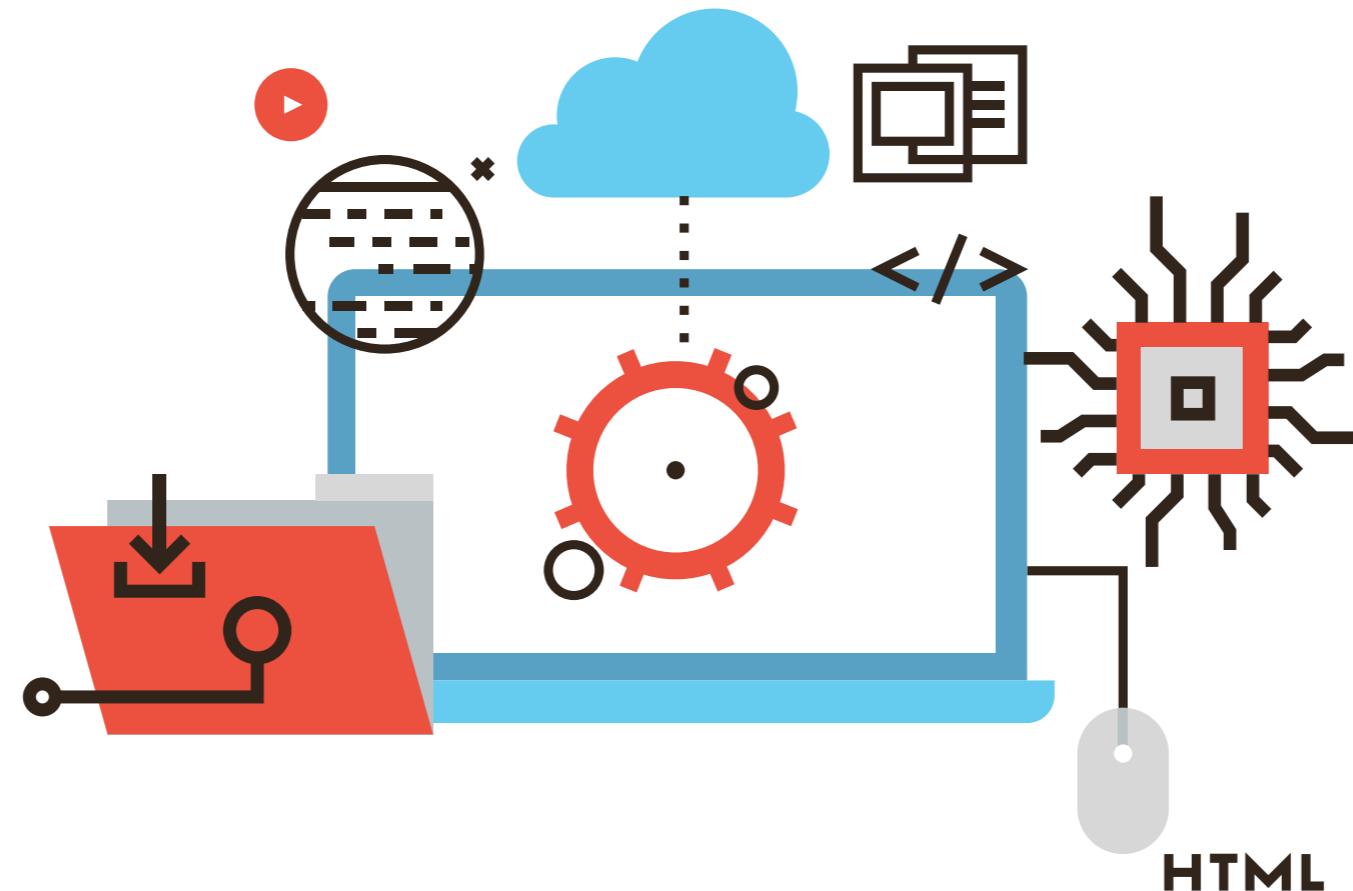
Causal Approach



SWOT Analysis

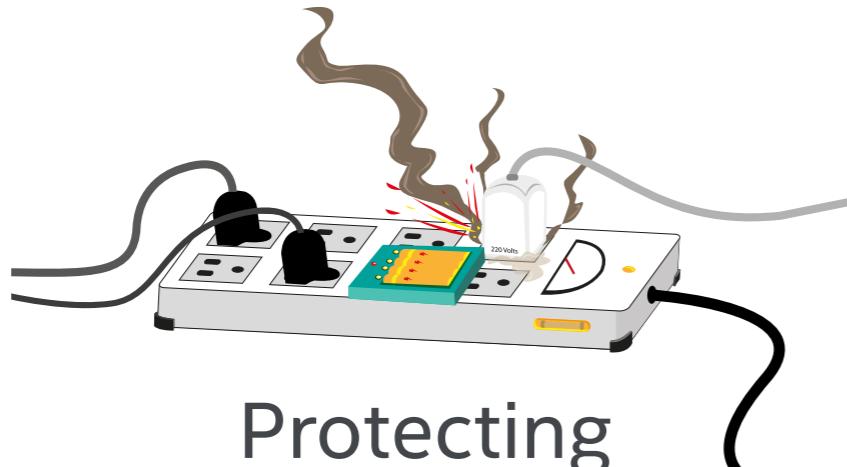
STUDY THE SYSTEM

What will your solution integrate with?

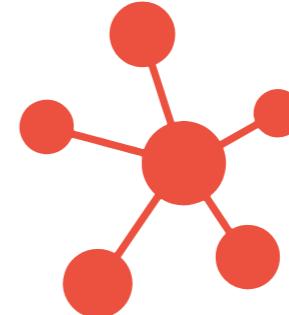


Analyze various aspects of your design from
hardware and software standpoints

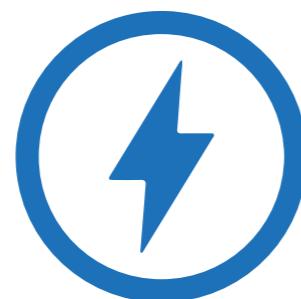
HARDWARE ASPECTS TO CONSIDER



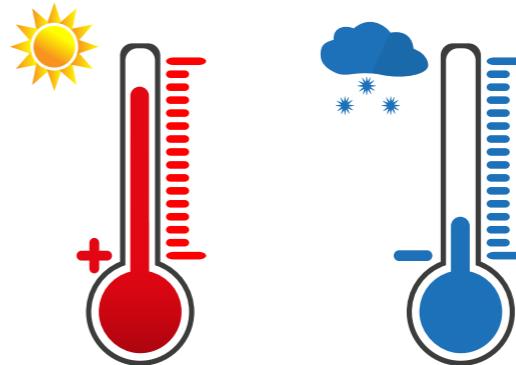
Protecting
your wiring



Getting a network
connection

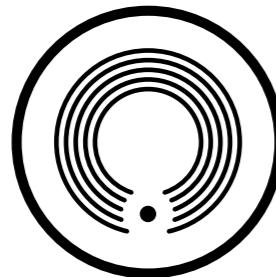


Source of power
for a remote design

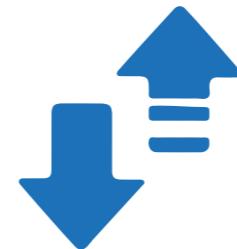


Protecting the IoT device
from adverse
environmental conditions

SOFTWARE ASPECTS TO CONSIDER



Communicating
with sensor(s)



Transmitting
data



Programming
languages to use



Designing for
maximum uptime



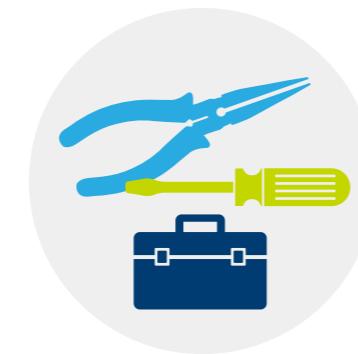
Interfacing with devices

CAUSAL APPROACH

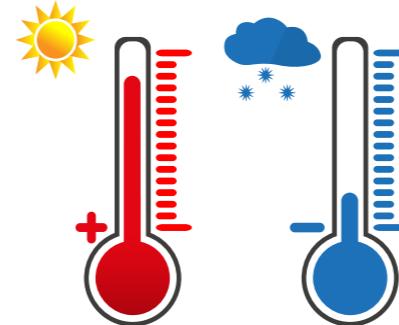
Identify the root cause of the problem



People



Resources



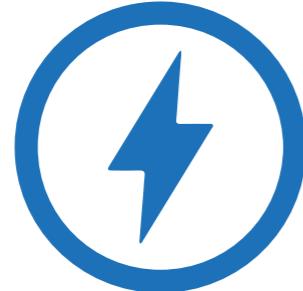
Environment



Policies

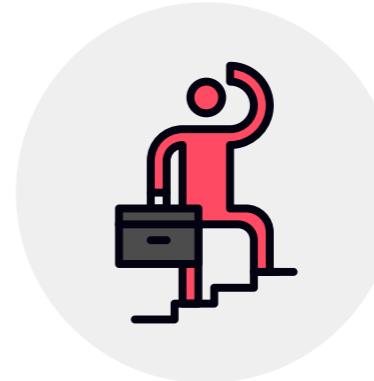
Ensure that people are following policies and procedures appropriately. Supplement the system with increased data to improve accuracy.

SWOT ANALYSIS



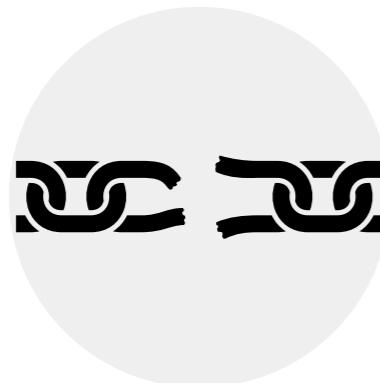
Strengths

What does the solution do best?



Opportunities

What can be explored in future?



Weaknesses

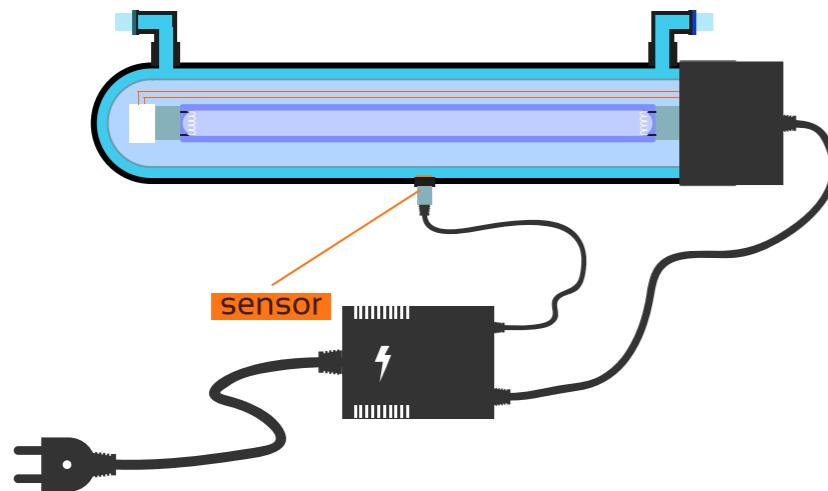
What is it not good at?



Threats

What can cause it damage?
Corrosion, Weather, Animals, etc.

CONSIDER HARDWARE ALTERNATIVES

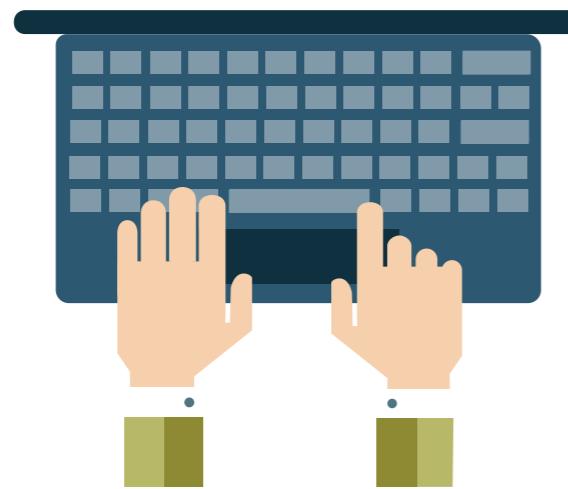


Can wiring a sensor remotely
to a shielded and protected
IoT device solve
the problem?

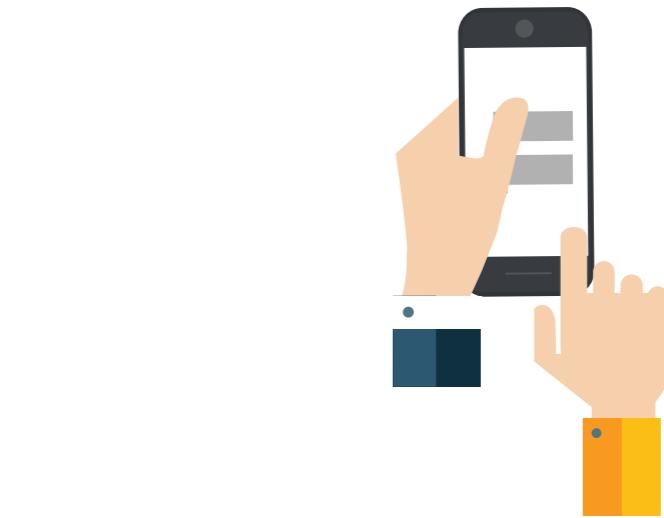


Can using a wireless sensor that's
connected to a network help
capture data?

CONSIDER HARDWARE ALTERNATIVES

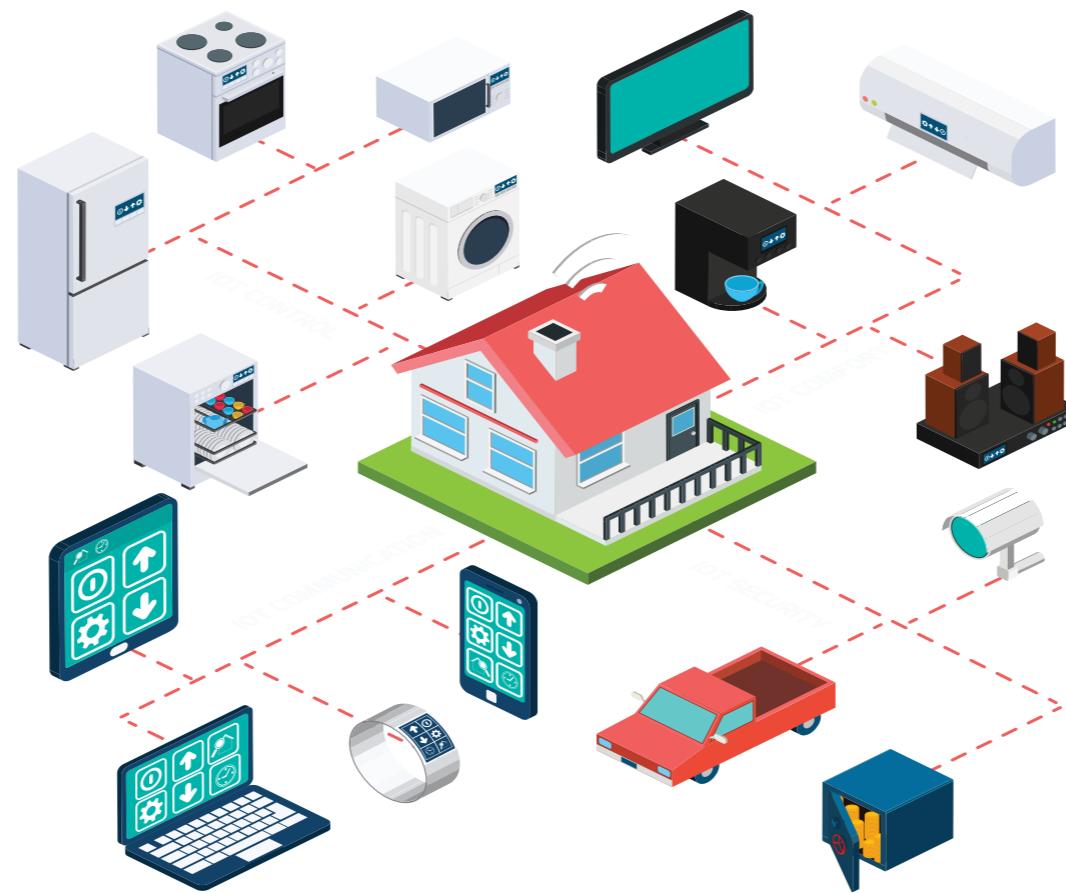


Can you capture data locally and then have a human login to the device periodically to gather data and upload?



Can you have a constantly connected IoT device, using cellular service?

Remember! Never discount a solution.



A simple design could end-up being more favourable due to its simplicity, production cost, or other features.