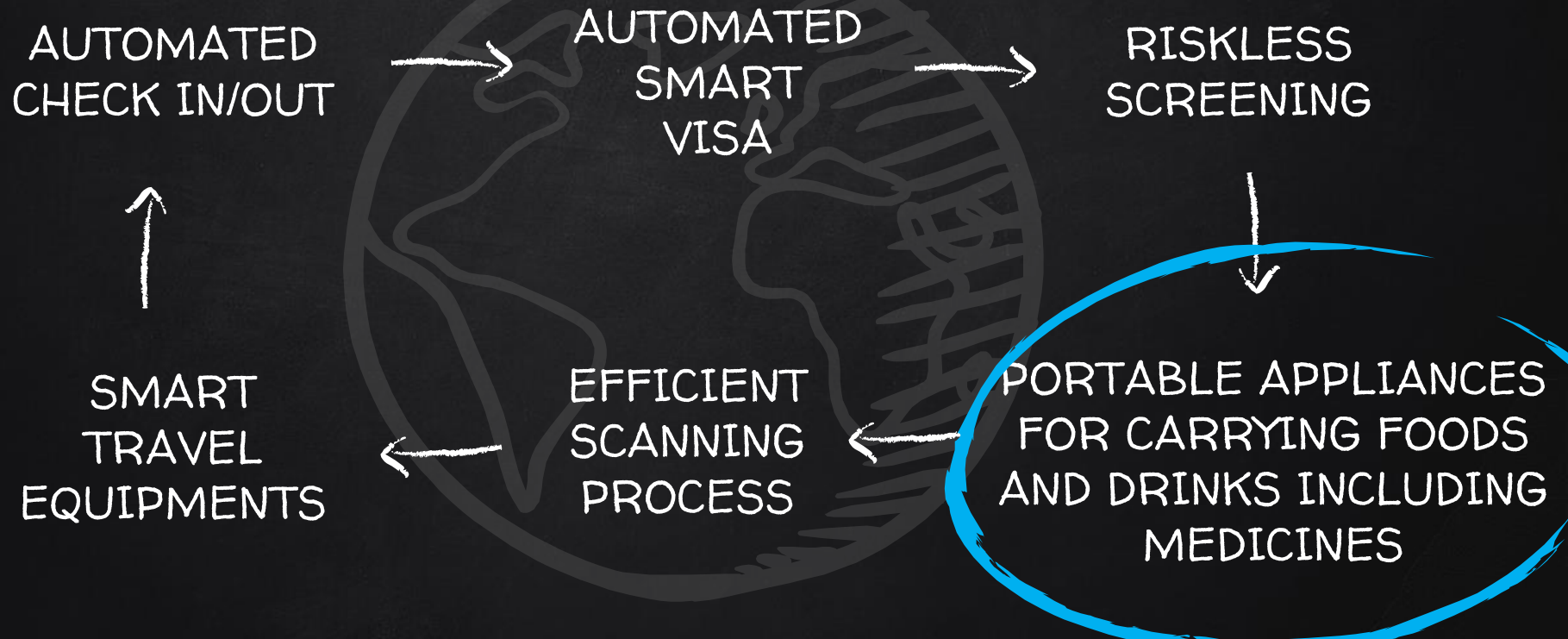
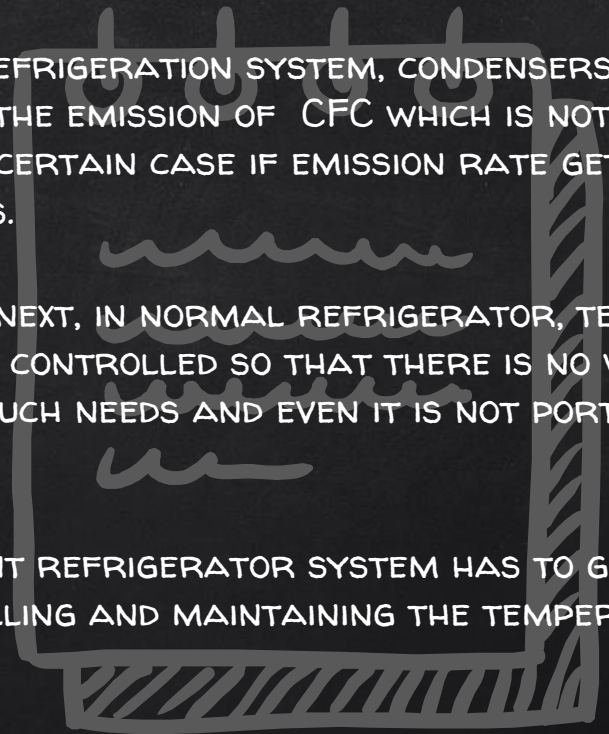
THE PORTABLE SMART REFRIGERATOR

REQUIREMENTS IN SMART AND EASY TRAVEL AND WHAT WE HAD DID IN IT!!



PROBLEM STATEMENT



1. In the current refrigeration system, condensers and evaporators are used which results in the emission of CFC which is not ecofriendly and affects environment . In certain case if emission rate gets high, it may even cause effect on humans.

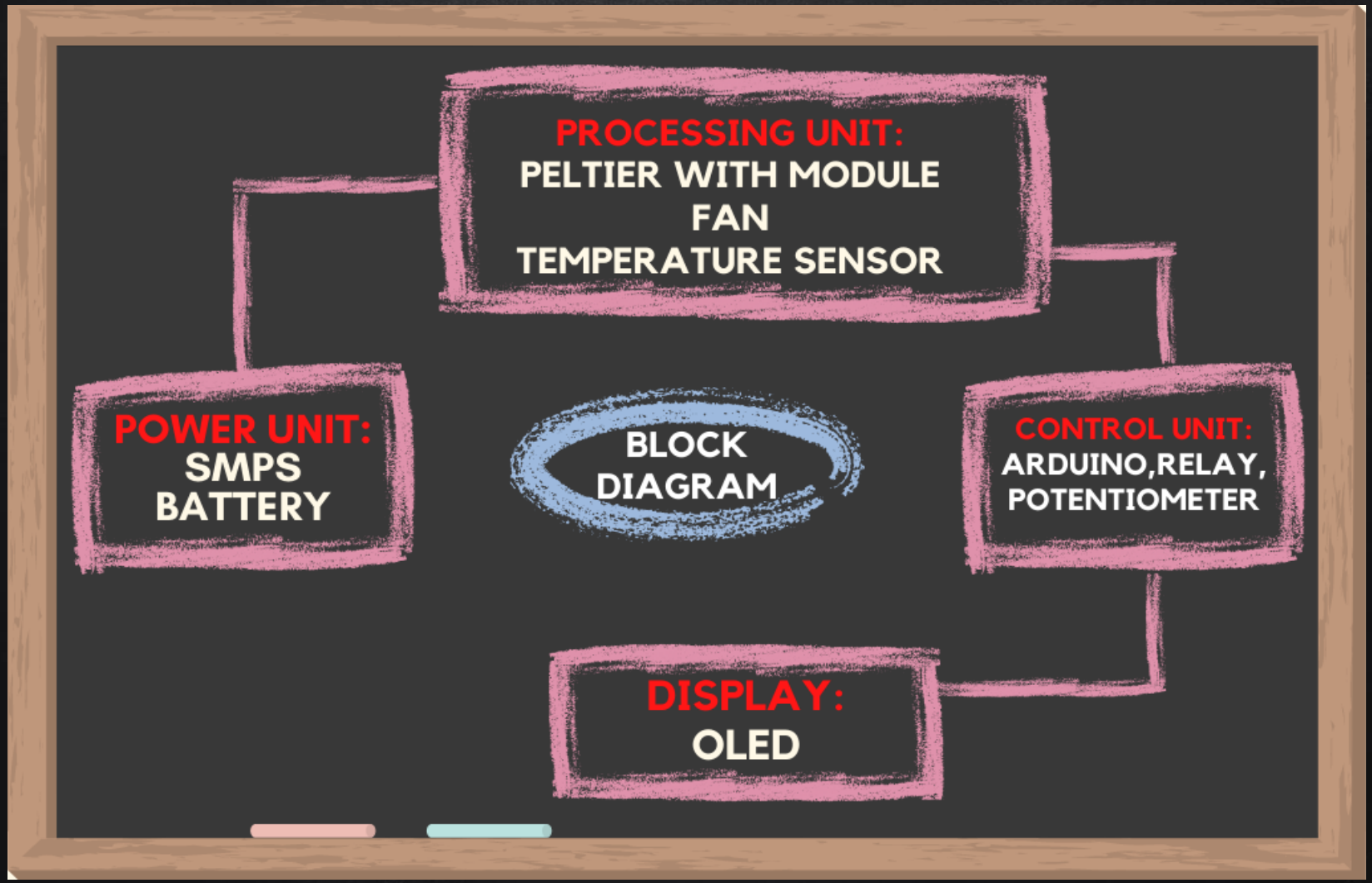
2. Switching to the next, in normal refrigerator, temperature can't be visible and even can't be controlled so that there is no way for maintaining the temperature in such needs and even it is not portable and may be of quite high cost.

3. Hence the current refrigerator system has to get some improvements in terms of controlling and maintaining the temperature and of portable weight.

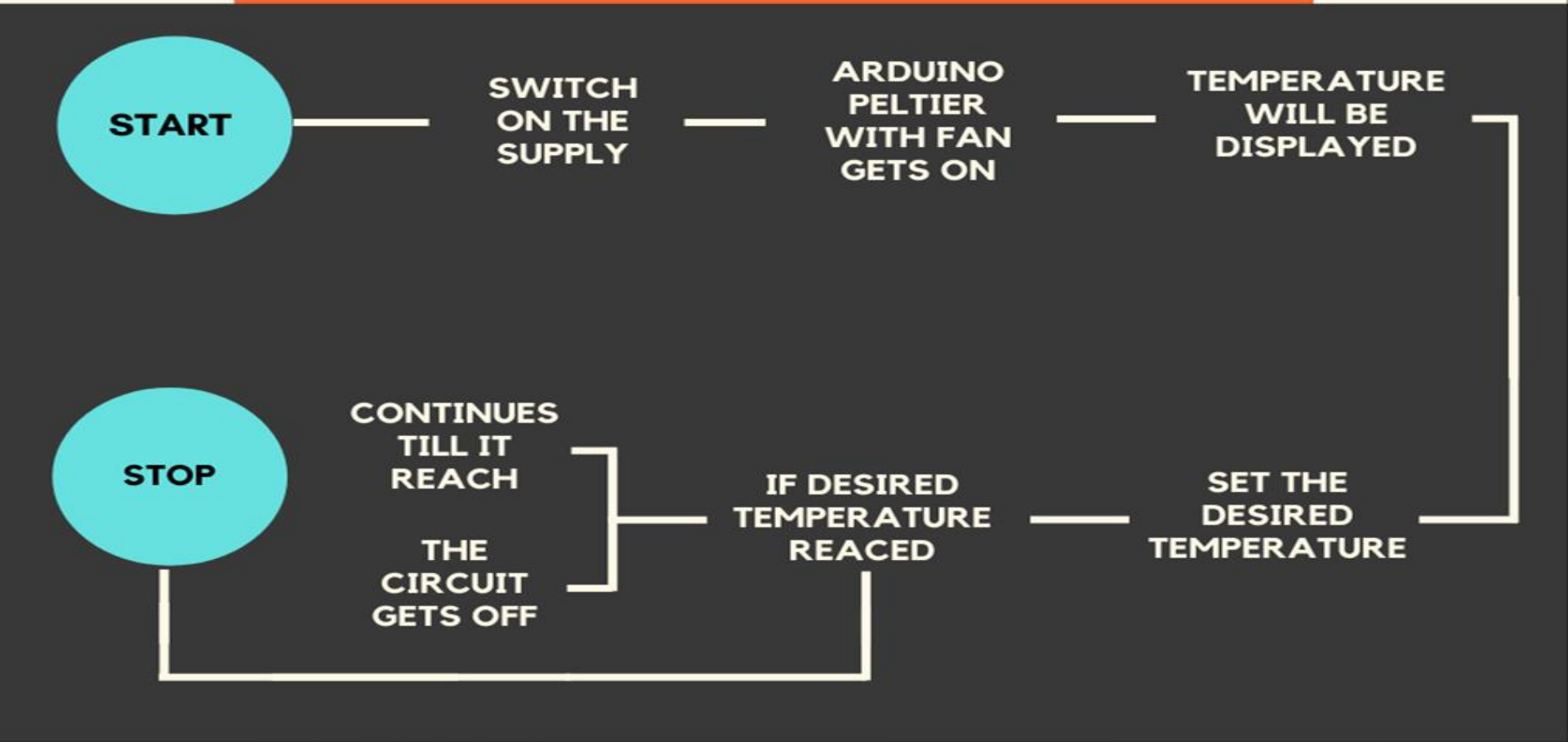
PROPOSED SOLUTION

1. The recent technologies like IOT, wireless communications and controllers interfacing like PIC , Raspberry pi, Node MCU and arduino helps to control and to set the desired temperature as much required for the refrigeration system.

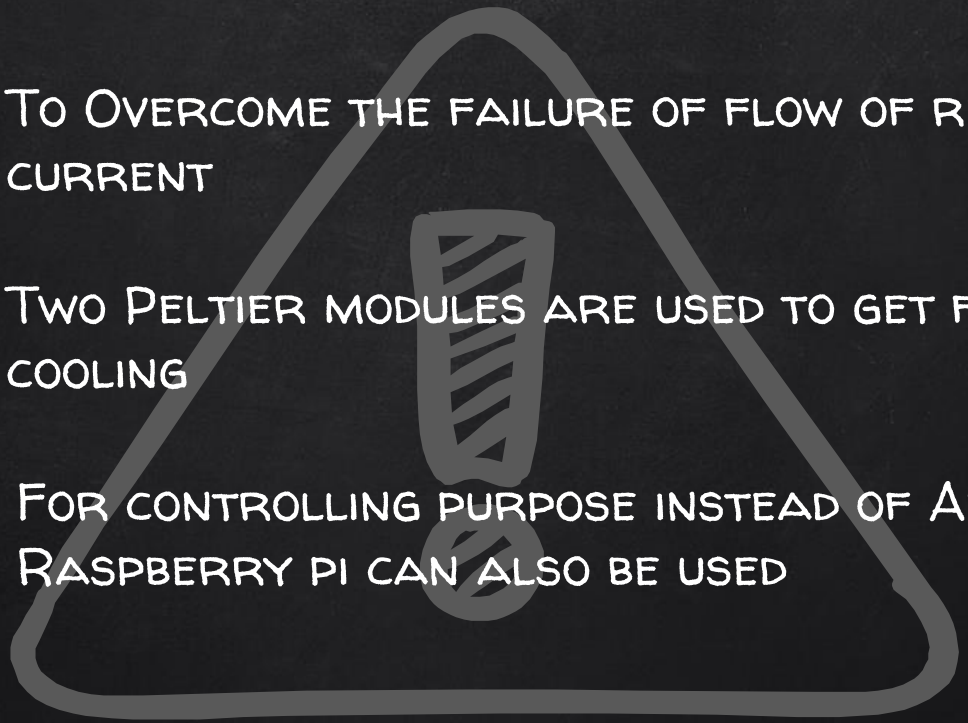
2. Mainly our proposed system provides the solutions for temperature controlling and maintaining, desired cooling at desired level and also which is going to be portable and be ecofriendly.


PROCESSING UNIT:
PELTIER WITH MODULE
FAN
TEMPERATURE SENSOR
POWER UNIT:
SMPS
BATTERY
BLOCK
DIAGRAM
CONTROL UNIT:
ARDUINO,RELAY,
POTENTIOMETER
DISPLAY:
OLED

FLOW DIAGRAM

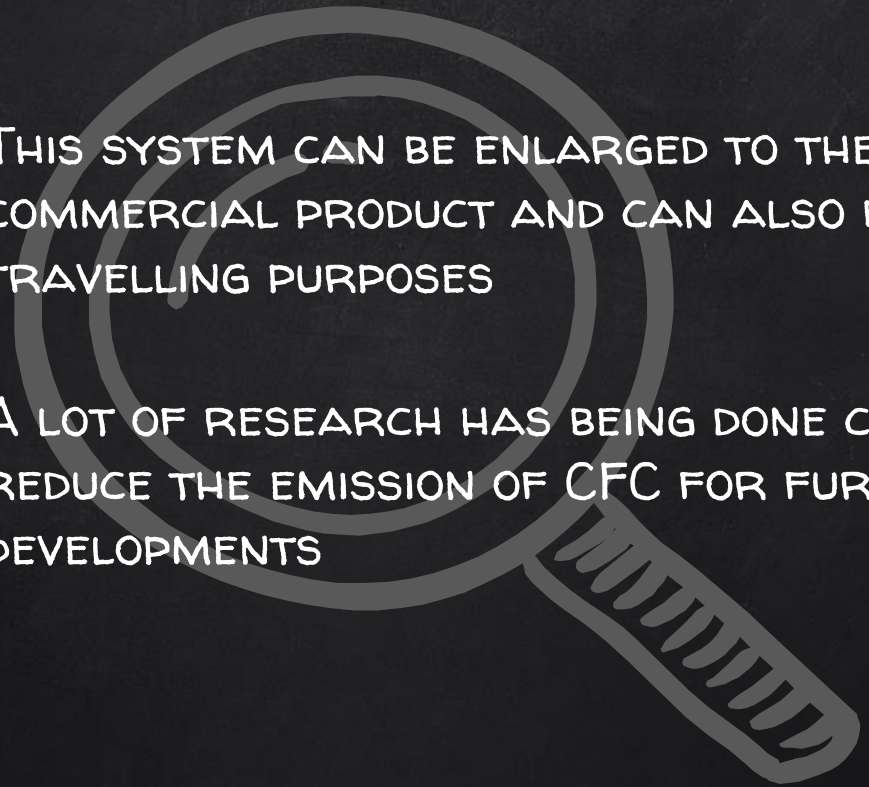


RISKS



1. To Overcome the failure of flow of reverse current
2. Two Peltier modules are used to get faster cooling
3. For controlling purpose instead of Arduino, Raspberry pi can also be used

FUTURE SCOPE



1. This system can be enlarged to the commercial product and can also be used for travelling purposes

2. A lot of research has being done currently to reduce the emission of CFC for further developments

CONCLUSION

This technique provides the solution for the emission of CFC from normal refrigerators

Smart and Portable refrigerators can be used to carry our own foods and medicines to the desired place at desired level of temperature

This equipment provides improved efficiency compared to the normal refrigerator