Discussion on research project

16th May, 2020

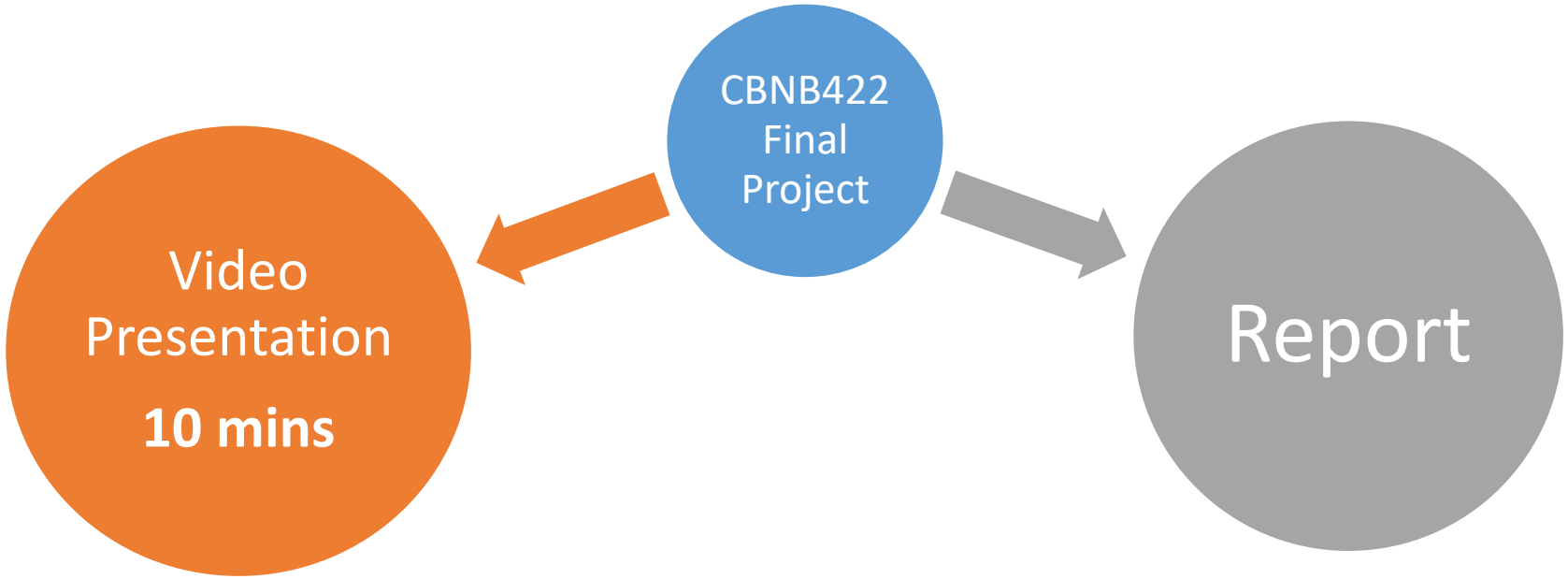
The question:

- A: The topic/area

ICT is used widely in the **energy** sector, and to ease pollution (such as reduction of carbon footprint). Propose an **ICT solution** to address an identified problem in any one of these domains chosen:

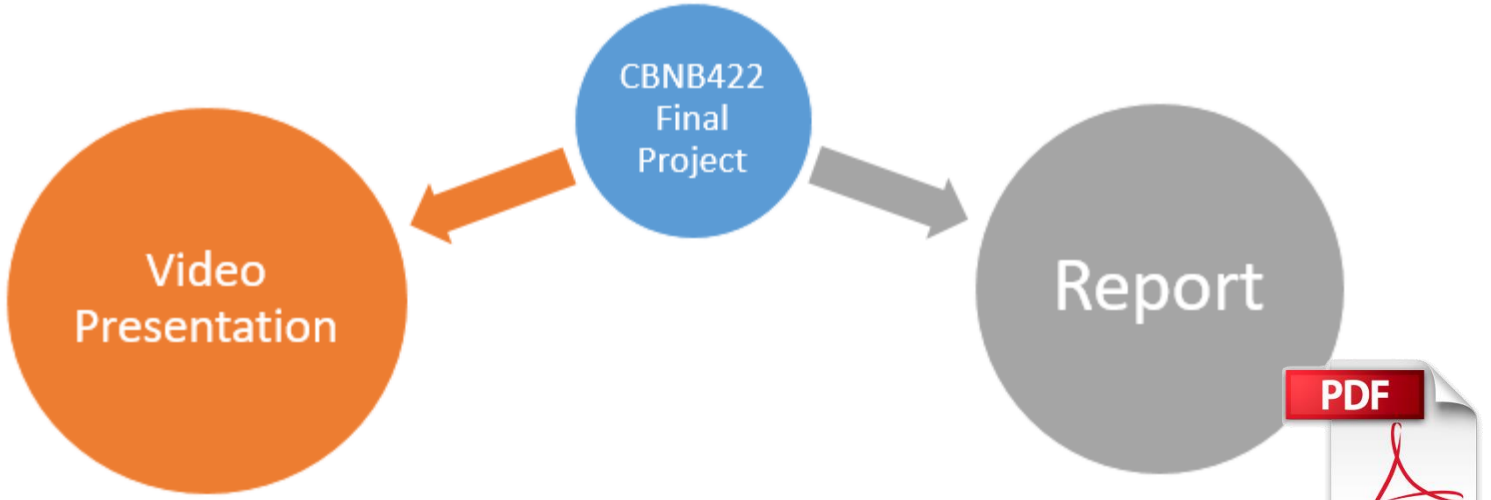
  - The Oil and Gas industry.
  - The Electricity industry.
  - The use of ICT in renewable energy sector.
  - Prevention or reduction of environmental pollution (e.g. the transportation sector, pollutants detection).

What to submit?



When → LATEST by **5th June 2020**
to submit?

How →
to submit?



YouTube

https://youtu.be/jT9ScMAe5yQ

https://influencermarketinghub.com/free-video-editing-software/

Email: **my.ridhaomar@gmail.com**

What to include in your video presentation?

1. Introduction of your group members
2. State your chosen domain… and WHY, WHAT motivates/triggers your choice.
3. What is the EXACT problem which your group will be addressing?
4. How SEVERE/SIGNIFICANT is the chosen problem? What are the –ve impacts the problem brings about to the organization?
   - Show proofs, diagrams, comments/statements, figures or graphs, statistics
5. What is your ICT-based proposed solution to alleviate or eliminate the identified problem in #3.
   - A diagram or illustration of your proposal would be very, very good
6. How is your proposed solution is superior than the current available solutions; thus, then show how your proposed solution "efficiently" solves the problem.

Students need to ensure audience understand **what** the proposed solution is. Students may be able to do this by showing the solution's interface or a diagram showing how the proposed solution works.

Your report TOC

- Minimum:
  1. Cover/Title/Group Members (Name/Student ID/Section)
     - YouTube video link
  2. Introduction
  3. Problem statement(s)
  4. Current solutions – are/is there any current solution(s) available? If so what are the drawbacks of current solutions.
  5. Write-up on your proposed solution:
     - Interface design, or diagrammatic representation of your proposed system
     - Descriptions
     - Advantages of your proposed system. Why is it a better solution?
  6. Conclusion.

PART A - Report Write-up and Presentation Contents

Evaluation Criteria	10-9 marks	8-6 marks	5-3 marks	2-0 marks	10-0 marks
	Rubrics				Rating
1. The **identified** problem	Very well discussed, with sound justifications and examples	Good effort in presenting/writing up the identification of problem is evident	Acceptable discussion	Limited effort in presenting/writing up the problems identified	
2. The **significance** of the identified problem	Very well discussed with sound justifications to show the severity of the identified problem	Good effort in presenting the identified problem's severity	Acceptable discussion of the problem's severity	Limited effort in presenting the severity of the identified problem	
3. Discussion on similar solutions for the identified problems. "Competitors"/ current solutions analysis	Very well discussed with sound justifications	Good effort and justifications are evident in discussing the identified currently available solutions to the identified problem	Acceptable discussion	Limited effort in presenting the findings	
4. The unresolved problems, or the inefficiency of the current solutions (identified in #3), i.e. the **GAP** has been identified	The gap has been clearly identified, and the gap is **VERY SIGNIFICANT**	Good effort to present the identified gap	Acceptable discussion of the identified gap	Limited effort in presenting the identified gap	
5. **The proposed solution** – an ICT based system to solve the identified problem.	Very well discussed, the solution proposed is feasible and addressed the problem and the identified GAP	Good effort and justifications of the proposed solution	Acceptable discussion	The proposed solution is unclear, or not feasible	
6. The proposed solution's **overall** ratings	Very well discussed, the proposed solution is well thought of	Good effort to present proposed solution	Acceptable discussion of the proposed solution	Limited effort in presenting the proposed solution	

PART B – (Online) Presentation skills (20%)	
1. Clear and convincing identified problem and the proposed solution: Background, Challenge, Resolution	10%
2. Supporting materials and/or props used effectively	5%
3. Lively and enthusiastic speaking	5%
Total marks for the Presentation:	_____

PART A →(Total marks/60) x **80%** = _____

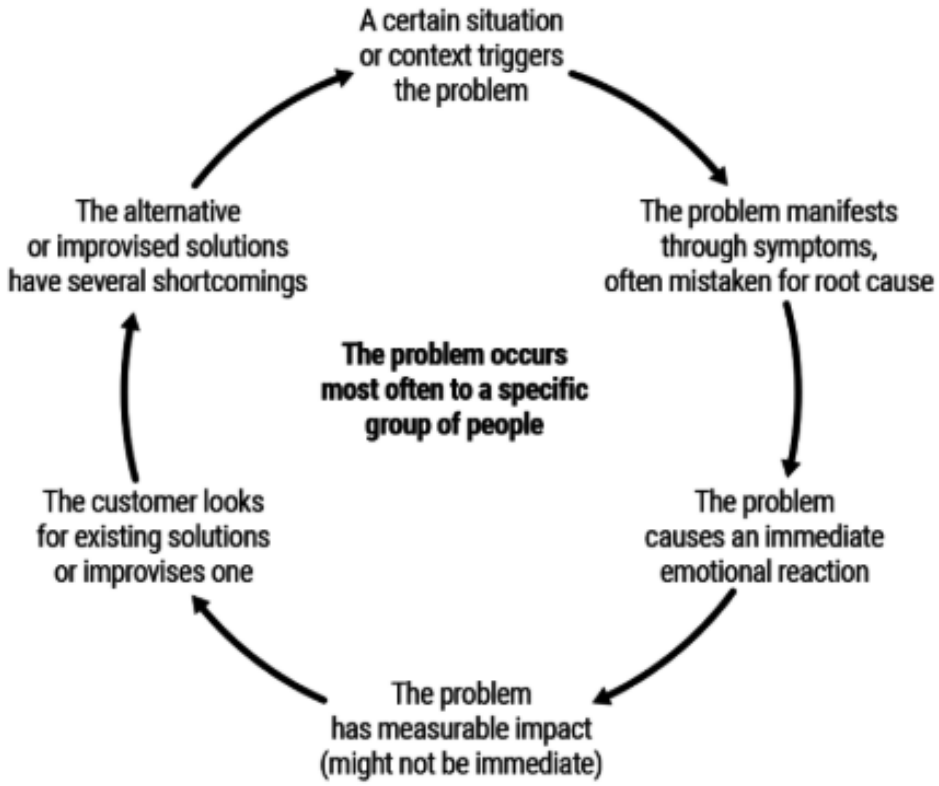
PART B →Presentation skills (**20%**) = _____

TOTAL (PART A + PART B = **100%**) = _____

Where to get ideas?

- Read your case **study #3**
- How to define your problem :

CONTEXT When does the problem occur?	**PROBLEM** What is the root cause of the problem?	**ALTERNATIVES** What do customers do now to fix the problem?
CUSTOMERS Who has the problem most often?	**EMOTIONAL IMPACT** How does the customer feel? **QUANTIFIABLE IMPACT** What is the measurable impact (include units)?	**ALTERNATIVE SHORTCOMINGS** What are the disadvantages of the alternatives?



The problem cycle

CONTEXT
When does
the problem occur?

Every workday, in the mornings and evenings for an average of 2-3 hours per day

PROBLEM
What is the root cause
of the problem?

Lose time in traffic instead of doing something more valuable

ALTERNATIVES
What do customers do now
to fix the problem?

Sign up for Uber and accept rides only when going to or coming back from work

CUSTOMERS
Who has the problem
most often?

Young men aged 25-35 with middle-low income, who live in suburban São Paulo and work in a corporate office in the city center

EMOTIONAL IMPACT
How does the customer feel?

Frustration & boredom

QUANTIFIABLE IMPACT
What is the measurable impact
(include units)?

Lose on average 40 hours per month

ALTERNATIVE SHORTCOMINGS
What are the disadvantages
of the alternatives?

Driving for Uber requires more time waiting for a ride, as trip origin & destination might not coincide with their home-work itinerary

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TRIGGER

PROOF

WINDOW OF OPPORTUNITY

IMPACT

OPPORTUNITY

CUSTOMERS
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MOTIVATION

COMPETITIVE ADVANTAGE

Strengths

What are we *really* good at?

What do we do better than our competitors?

What do our customers like about our business?

What valuable assets does our company have?

Weaknesses

What are we not so good at?

What do our competitors do better than us?

What do our customers complain about?

What factors are holding our business back?

SWOT

Opportunities

What regulatory changes could help us?

Is the market for our products growing?

What opportunities have we not pursued yet?

What new opportunities are ahead of us?

Threats

Who are our current competitors?

Is the need for our products declining?

Is our cost of goods increasing?

Is the cost of acquiring customers increasing?

INTERNAL

Strengths	Weaknesses
• Potential series production of reactors (« off-the-shelf product ») • Reducition of construction period of low-power units (reduction of civil works) • More accessible financing for reactors (lower global construction cost than high-power stations)	• Ill-suited certification process of new reactors for spatial multiplication of units • Necessary adaptation of international safety controls (e.g.: prescriptive character of recommendations based on peer reviews)
Opportunities	**Threats**
• Emergence of new markets (electro-intensive industry, isolated sites, replacement of low-power production stations, etc.) • Aftereffects on the whole nuclear industry and especially on the downstream sector (dismantling and waste treatment)	• Nuclear proliferation with multiplication of units • Acceptability by populations and politics (difficulty to perceive nuclear energy as an energy of the future)

POSITIVE

NEGATIVE

EXTERNAL

VALUE PROPOSITION CANVAS

TESLA

UPPER MIDDLE CLASS MALE $100k+ INCOME

GAIN CREATORS

- PERFORMANCE 0-100 KM/H 4.4S-6.2S
- HIGH-TECH FEEL 17" TOUCH SCREEN
- 8 YEARS BATTERY WARRANTY
- FEW OPTIONS
- FOCUS ON DESIGN & STYLE
- AUTONOMOUS CAR

PRODUCTS & SERVICES

- MODEL S 60-85 kWh
- MODEL X MODEL 3
- 5+2 SEATS
- CHARGING 45-90 KM/H
- CHARGING NETWORK

PAIN RELIEVERS

FIT

GAINS

- BRAND RECOGNITION
- HIGH SAFETY RATINGS
- SEATING 4-7
- BE DIFFERENT FROM OTHERS
- PERFORM LIKE A SPORTS CAR
- RANGE OF 250 - 400 KM
- HIGH-END BATTERY TECH
- OCCASIONAL LONG DISTANCE TRIP
- DESIGN
- COMPLIMENTS FROM FRIENDS

JOB-TO-BE DONE

- COMMUTE TO WORK
- CONVEY AN IMAGE OF SUCCESS
- PERSONAL MOBILITY

PAINS

- BUY BEFORE PRICE DROP
- LACK OF CHARGING STATIONS
- FEAR OF DEAD BATTERY
- FREQUENT CHARGING
- ACCIDENT AND HARM

VALUE PROPOSITION CANVAS

TOYOTA

MIDDLE CLASS MALE $50-75k INCOME

GAIN CREATORS

- ADAPTIVE CRUISE CONTROL
- CUSTOMIZE YOUR DESIGN
- HYBRID CAR
- A LOT OF OPTIONS
- MANUAL CAR
- FOCUS ON COMFORT & SPACE
- URBAN STYLE

PRODUCTS & SERVICES

- MODELS: SPORTS, PRIUS, LAND CRUISER,
- MODELS: PROACE, MIRAI, VERSO
- 5 SEATS
- TOYOTA SAFTY SENCE

PAIN RELIEVERS

FIT

GAINS

- BRAND RECOGNITION
- HIGH SAFETY RATINGS
- SEATING 3-5
- BE THE SAME AS FRIENDS
- PERFORM LIKE A BIG FAMILY CAR
- RANGE OF 150 - 250 KM
- DISTANCES ARE NOT FAR FROM HOME
- DESIGN
- TO COMPARE WITH CAR OF FRIENDS

JOB-TO-BE DONE

- COMMUTE TO FAMILY ACTIVITIES
- CONVEY IMAGE OF HAPPY FAMILY
- BUY BEFORE PRICE DROP
- LACK OF CHARGING STATIONS
- PERSONAL MOBILITY

PAINS

- FEAR THAT SOMETHING HAPPENS WITH CAR
- FREQUENT CHARGING
- ACCIDENT AND HARM

TQ