

Course Project & CMU-WIT Collaboration

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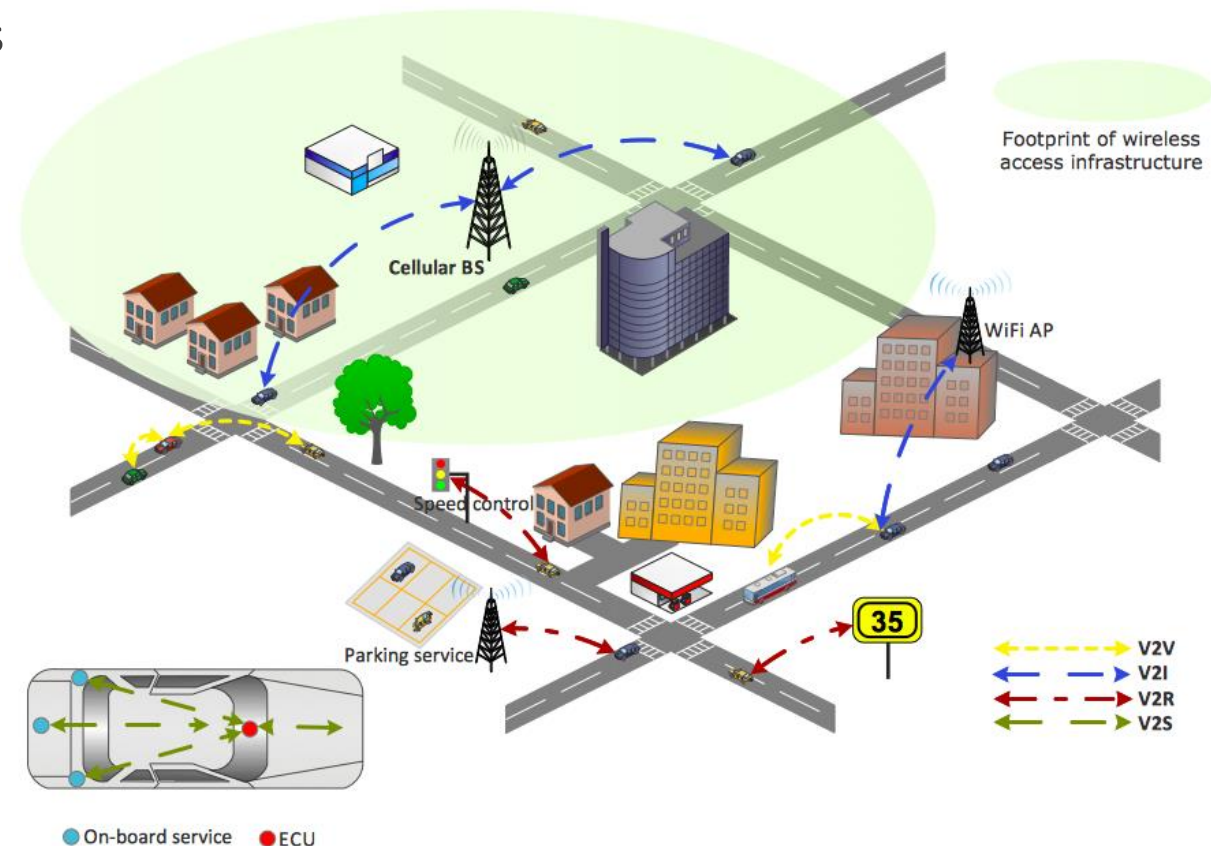
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Project Requirements

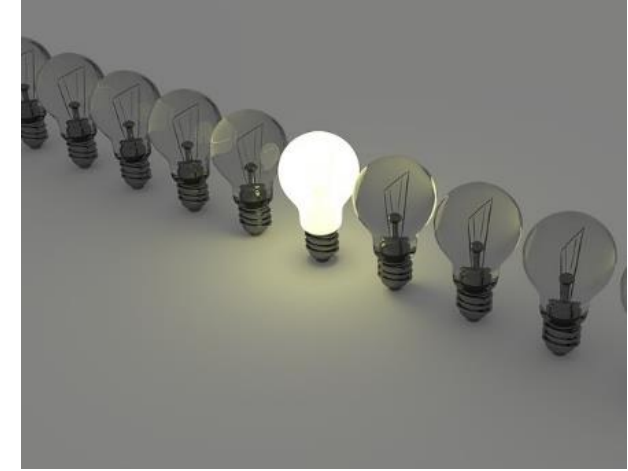
- ❑ The project should incorporate the different layers (sensor, processing node, gateway, application) of IoT architecture.
- ❑ The central theme of the project should be on vehicles
 - ❑ Vehicle to Vehicle (V2V)
 - ❑ Vehicle to Road Infrastructure (V2R)
 - ❑ Vehicle to Internet (V2I)
 - ❑ Vehicle to Sensor onboard (V2S)
- ❑ Other focus areas: Needs instructor approval



Deadlines

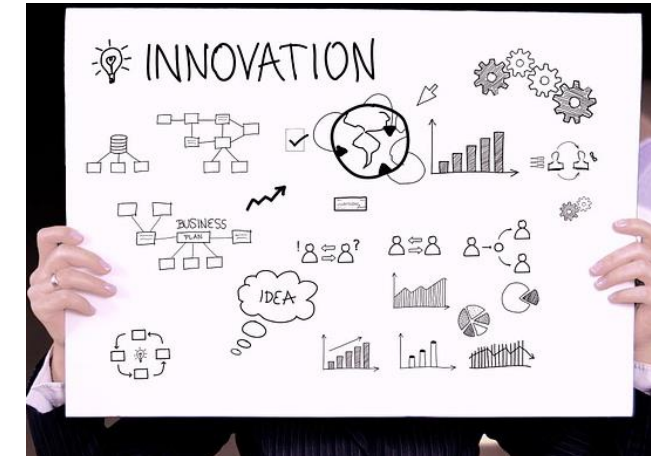
□ Project Concept – Oct 01, 2018

- Identify project, goals, specifications
- Include literature review (only published work, not personnel blogs) of related work. Minimum of three sources
- **Deliverable** – One page document (single column, single line space, 12point font) addressing the above
- List of supplies necessary, including itemized cost of each item



□ Project Proposal – Oct 22, 2018

- Identify scope, rationale, goals
- Address how you plan to meet the design goals
- List anticipated challenges
- **Deliverable:** Two-page document (single column, single line space, 12point font) with *Abstract, Introduction, and Previous Work* sections



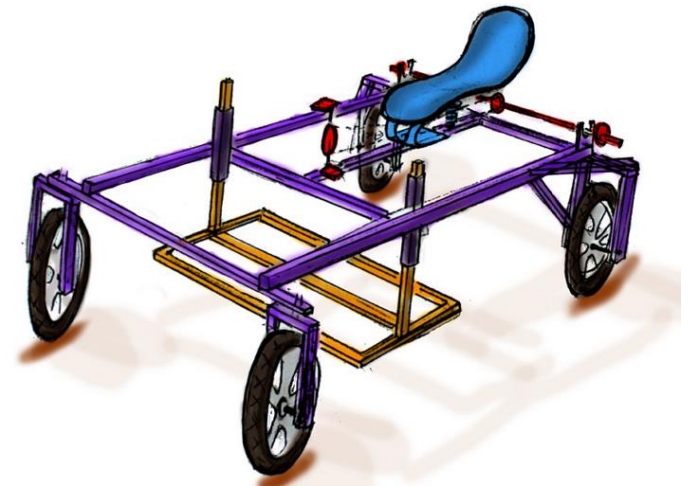
Deadlines

□ Project Graphics – Oct 29, 2018

- Pictorial (block level?) representation of project
- Flow chart of potential algorithm
- Informational flow diagram
- **Deliverable** – PowerPoint slides addressing the above
- *Note*: Do NOT use MS Paint

▪ Benchmark Metrics – Nov 05, 2018

- How would you evaluate success/failure of the project?
- **Deliverable** – Updated PowerPoint presentation



Deadlines

□ Interim Presentation – Nov 12, 2018

- Current status of the project (problem statement, rationale, previous work, current status, diagrams, results etc)
- Current challenges in the project
- **Deliverable** – PowerPoint slides addressing the above

■ Draft Manuscript – Nov 19, 2018

- Updated document with information on *Methods, Results, Evaluation, Discussion*
- **Deliverable** – 4-6 page word document (single column, single line space, 12point font)



Deadlines

□ Final Presentation – Dec **xx**, 2018

- Problem statement, rationale, previous work, methods, results, evaluation, limitations, future work etc.
- **Deliverable** – PowerPoint slides addressing the above

■ Final Manuscript – Dec **xx**, 2018

- Updated document with information on *Methods, Results, Evaluation, Discussion, Limitations, Future Work*
- **Deliverable** – 6-8 page word document (single column, single line space, 12point font)



Sample Projects

- ❑ Smart Parking System to denote available lots in an App
- ❑ Energy Harvesting on roads to power street light
- ❑ Real-time vehicle status update using LoRa technology
- ❑ Real-time driver style assessment update
- ❑ Real-time image recognition and classification of objects

Teams

- ❑ 3-4 members per team
 - ❑ Needs to have at least 2 students from CMU in each team
 - ❑ Needs to have at least 1 student from WIT in each team
- ❑ Must communicate on a continuous basis (bi-weekly at the latest)
 - ❑ Modes: Slack (preferred), Skype, Email etc.
 - ❑ Slack → [Any particular room to join?](#)



Teams

□ Document Sharing

- Each team will have a shared [OneDrive](#) folder with read and write permissions
- All teams should post working codes, schematics, reports, presentations in respective folder



Questions?