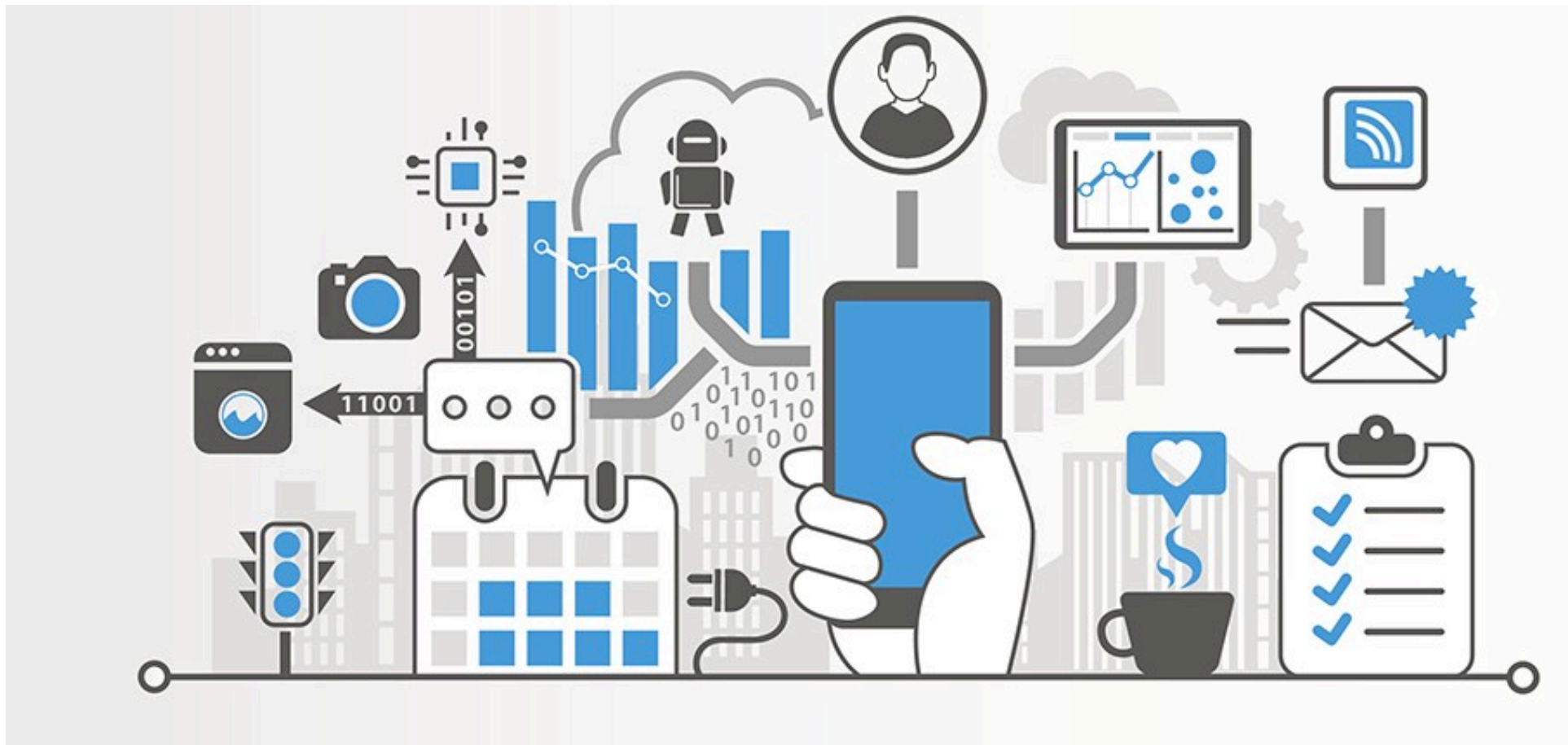




# Programming for IoT Applications

Edoardo Patti  
Project Guidelines





# Project Guidelines

## Team

- team members: **4**
- team building: autonomous
- Each team needs to send an email to [edoardo.patti@polito.it](mailto:edoardo.patti@polito.it) specifying team members info (name, surname and student-ID)



# Project Guidelines

To complete a project each team has to:

- submit a proposal that describes the general idea for an IoT platform and the role of its components. It must be compliant with
  - The topics of the course
  - The provided “proposal template.docx”.
- submit the source code
- make a “promo” video describing the proposed idea available on youtube (**max 4 minutes**)
- make a “demo” video (demonstrating that each component of the platform works) available on youtube (**max 10 minutes**)
- orally discuss the developed platform. The discussion date is flexible (no time constraints) **max 20 min.**
- **In any case, all provided HW material must be strictly returned by beginning of September 2020 (strict deadline).**



# Project Guidelines

- Each team has to submit a proposal by December 22<sup>nd</sup>
  - Send by email the provided template filled in all its parts to [edoardo.patti@polito.it](mailto:edoardo.patti@polito.it).
- A proposal can either be:
  - **ACCEPTED** as it is.
  - Asked to perform **MINOR** or **MAJOR REVIEW**. The team has to modify the proposal following the given indications.
  - **REJECTED**.
- Only after the proposal is **ACCEPTED**, the team can start developing the platform
- Submit videos and source code to [edoardo.patti@polito.it](mailto:edoardo.patti@polito.it) at least 5 days before the discussion.
- Example of videos are available at <https://goo.gl/Pdtp54>



# Project Guidelines

- The max final score for the project is **18/30**.
  - Each phase of the project is given a score.
- A **bonus** can be given (**max 2 points**) if the project includes additional tools and/or third-party platforms not presented during the course.
- The project will be **immediately rejected** if:
  - The IoT platform does not follow the **microservices** design pattern (**DO NOT DEVELOP MONOLITIC SOFTWARE**)
  - The IoT platform is not developed following the **Object Oriented Programming**



# Project Guidelines

## Good practice to have a good score:

- Define a proper **data-format** for data exchange
- Make the IoT platform **scalable to manage various IoT devices** (e.g. adding/removing new devices at run-time without modifying the source-code)
- Use **configuration file** (e.g. a JSON file) to configure your IoT platform
- Guarantee information exchange among the actors in the system over the internet only (i.e. REST and/or MQTT)