... in the Internet of Things

Bachelor Project (PO)
Scenario Description

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Disaster!

What now?

Disaster

- Loss of infrastructure
- No communication!
- What to do now?

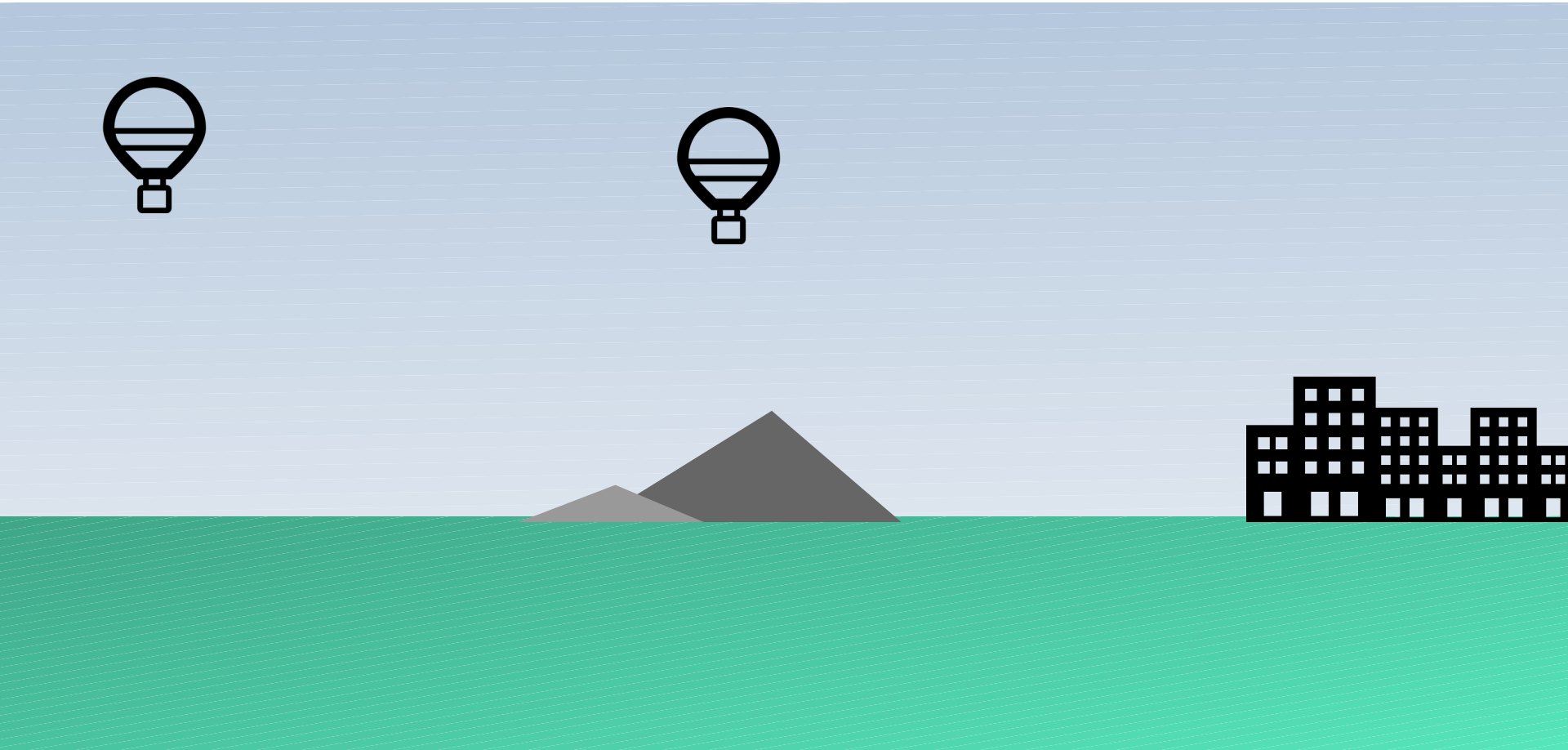
Goal: Quick Disaster Recovery

- Disaster assessment for first responders
  - Aerial overview pictures
  - Data collection & distribution
  - Basic communication (command and control)
- Infrastructure Requirements
  - Mobile & ad hoc
  - Fault & delay tolerant
  - Energy efficient & self sustainable

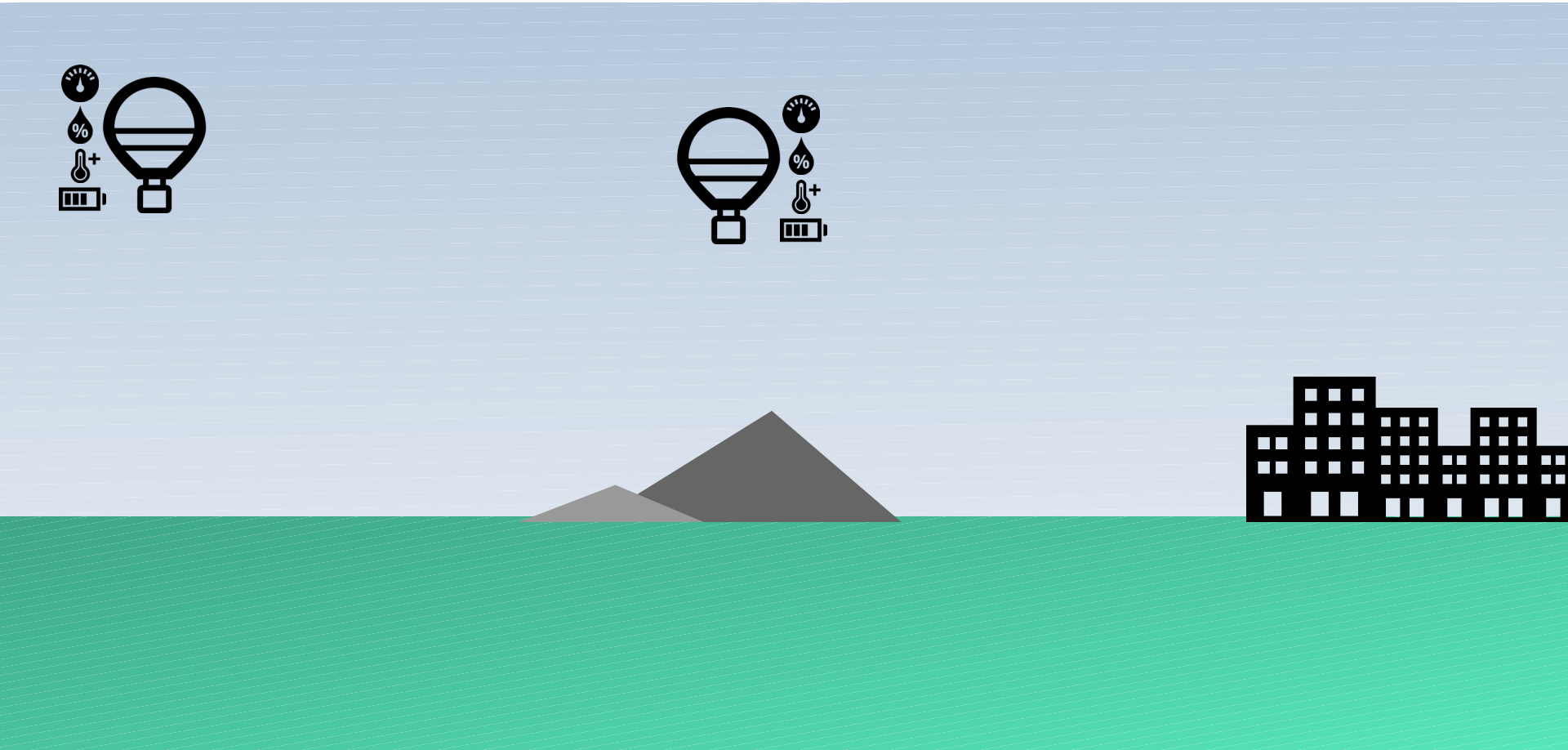
Approach: Balloons Serving Internet Infrastructure

- Easy to deploy
- Low cost hardware
- Mobile by design
- Scalable
- Wide area coverage
- Proven to work in large scale

Approach: Balloons Serving Internet of Things Infrastructure



Approach: Balloons Serving Internet of Things Infrastructure



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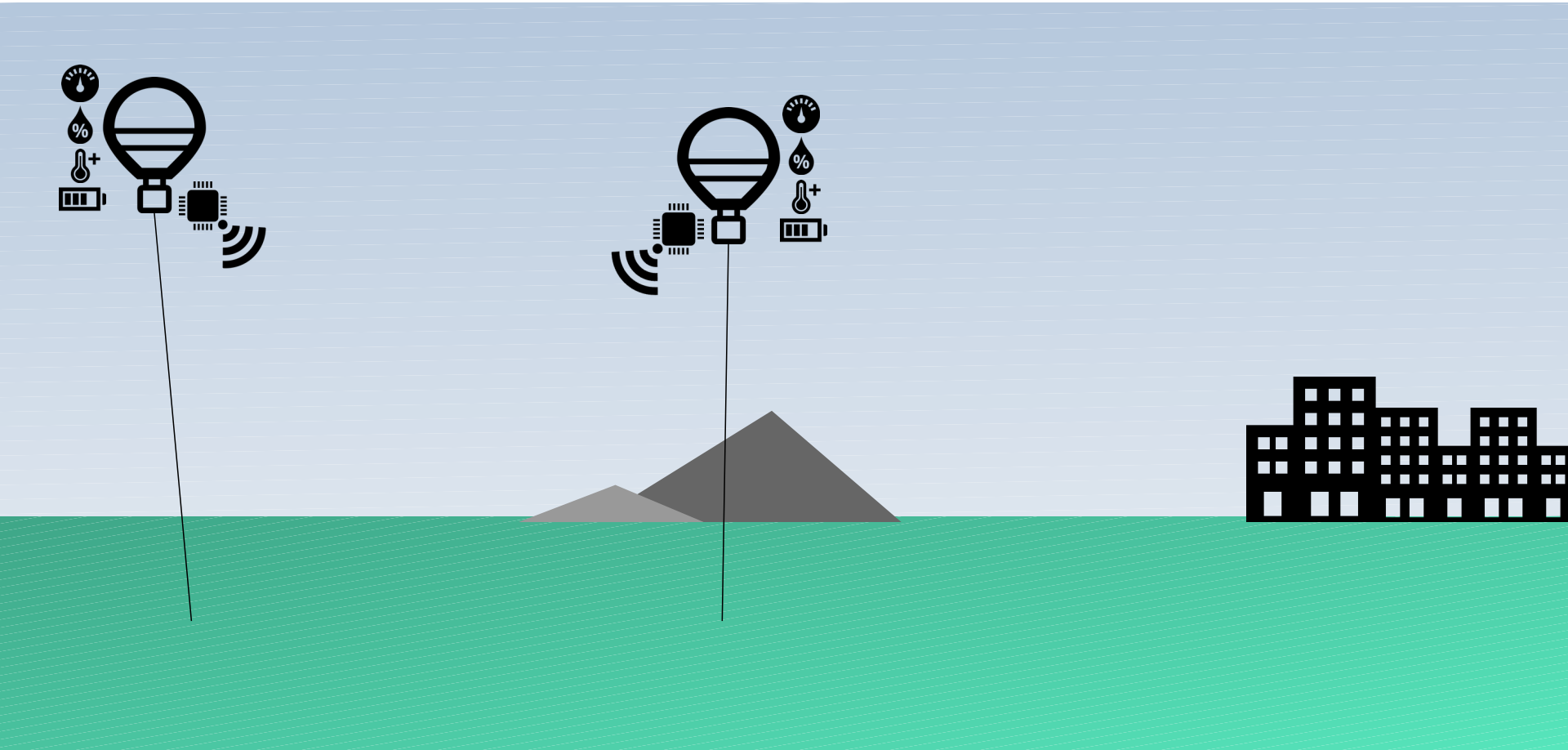

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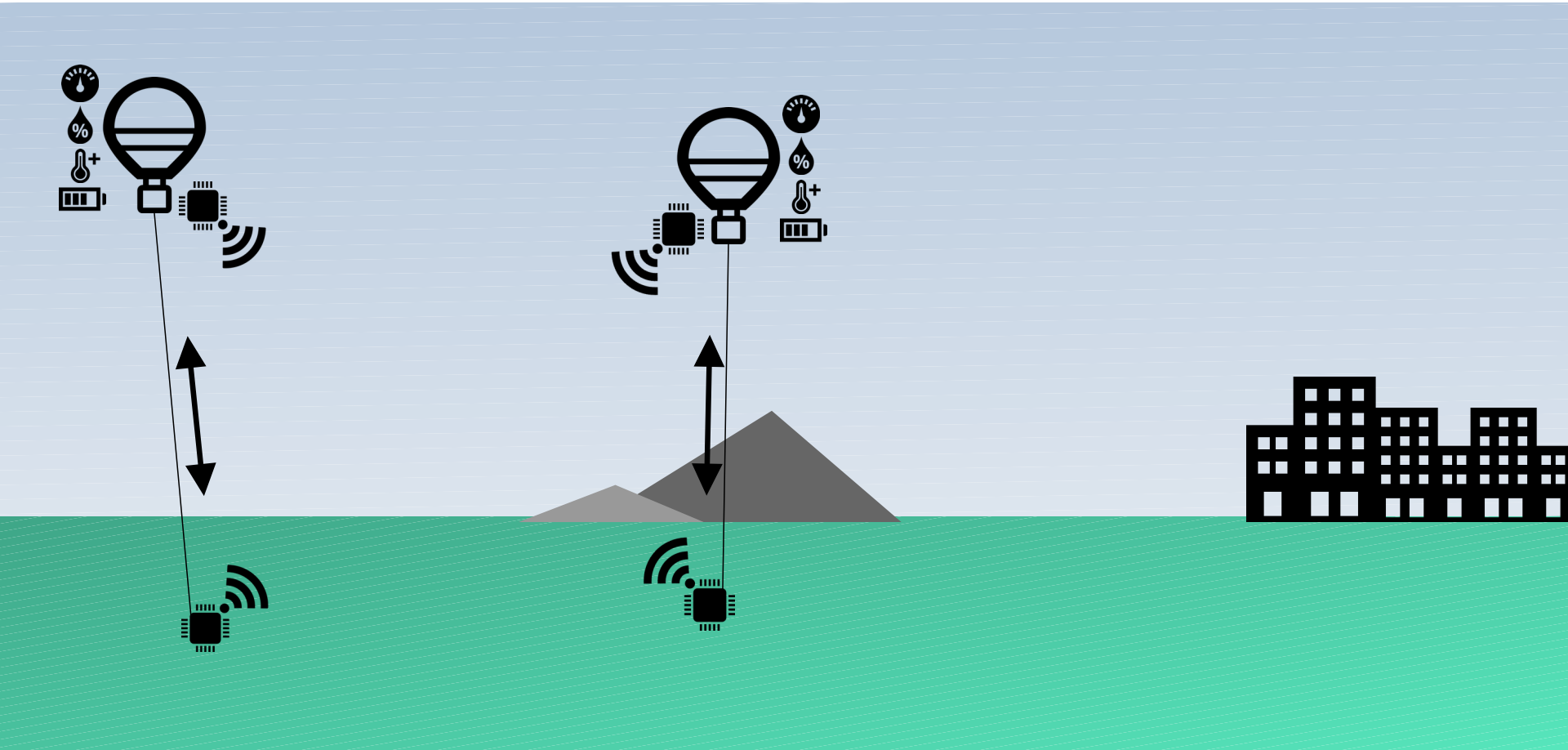

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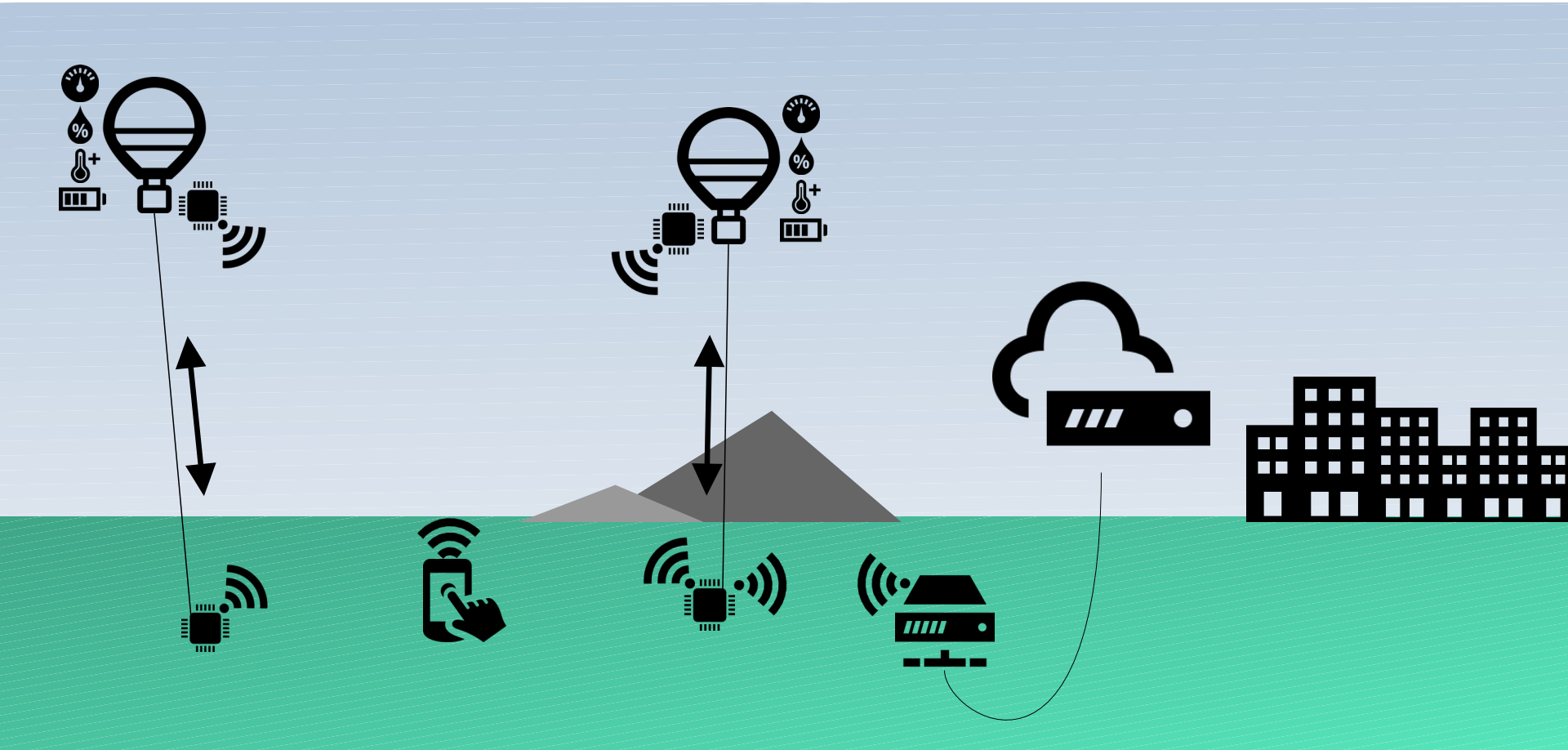

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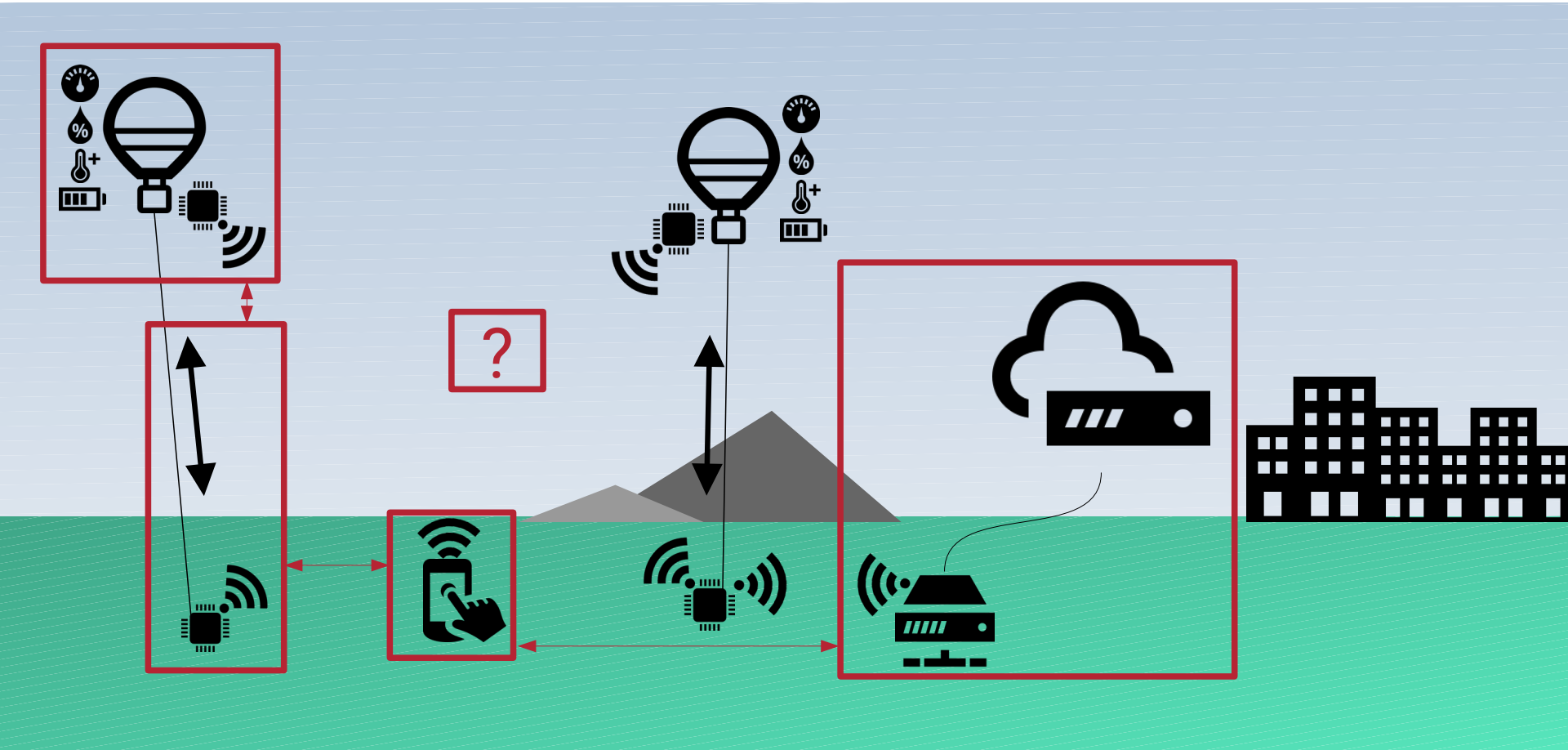

Formalities & Tools

- MS Teams
  - Access code
- GitHub
  - Everyone: send name, GitHub handle, HAW mail address to MS Teams
  - Own fork of https://github.com/RIOT-OS/RIOT
  - Code is always pushed to own RIOT fork
- Milestone Presentations
  - Mandatory: proper presentation, slides, documented source code checked-in
- Hackster.io
  - Project documentation and description linked to GitHub repository
  - https://www.hackster.io/riot-os

References

Related work

- [1] https://loon.com

Images

- https://de.freepik.com/fotos-vektoren-kostenlos/banner (Erstellt von macrovector)
- https://www.nationalgeographic.com/news/2015/04/150427-nepal-earthquake-damage-temples-buddhism-hinduism-world-heritage-monuments-unesco/#/01nepalday2.jpg
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