Introduction

We created Tiles IoT Cards to inspire ideas for novel Internet of Things products centered on human drives and desires.

Researchers can use the cards to brainstorm about how to include IoT components in their projects

Designers can integrate the cards in their own workflow to engage non-experts in ideation workshops centered on specific problem domains

Teachers can use the cards to introduce to the classroom basic concepts about design and programming IoT architectures.

In all cases Tiles IoT cards act as orienting devices to inform about the possibilities provided by the IoT, support collaborative and playful brainstorming and foster creative dialogue.

In this box you find 99 cards grouped in six decks.

- **THINGS** are everyday low-tech objects to be augmented with technology, they act as physical avatars for *services*
- **SERVICES** are a number of popular digital services like social networks, data providers and APIs
- **HUMAN ACTIONS** are the ways *the user* can interact with a physical *thing to* control a digital *service*
- **FEEDBACKS** are the ways a *service* can communicate to *the user* using a *thing*
- **MISSIONS** are provocative design goals to inspire creative combinations of *things, services, human actions and feedbacks*
- **CRITERIA** are critical lenses to reflect, evaluate and refine the ideas generated

The first four decks explain the basic ingredients of any IoT product; hiding technicalities they focus on how people experience the IoT as an ecology of humans, physical objects and digital information. The last two groups provide triggers for creativity and reflection to foster idea generation.

Tiles IoT Cards is a research project at the Norwegian University of Science and Technology, department of Computer Science.

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Please help us improving Tiles IoT Cards, let us know your feedbacks at cards@tilestoolkit.io.

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NTNU
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Basic Brainstorming Technique

Here we provide a simple playbook, but you can experiment using the cards in different ways. See http://tilestoolkit.io/cards to discover new ways of play.

On request, we offer a workshop package to learn about the Internet of Things and apply Tiles IoT Cards to design augmented objects to solve specific problems. The experience includes hands-on prototyping with code and electronics. Contact us at workshop@tilestoolkit.io

SETUP

Form teams of 2-6 people. When possible, create teams mixing skills and backgrounds. Have pen and paper ready. Each brainstorming session should last no more than 40 minutes.

IDEATION

Pick up one **MISSION** card and discuss it with your team. Think what problem the product you are going to design solves and for which user. Write them down on paper [10 min]

Browse **THINGS** and **SERVICES** cards. For each deck choose up to two cards that are relevant for the user and the problem. [5 min]

Browse **HUMAN ACTIONS** and **FEEDBACKS** cards. Think of how the *thing(s)* you chose can be used as a physical interface for the *services*. [5 min]

Combine the cards to form ideas for augmented objects that solve your mission. Discuss one or more possible usage scenarios. Sketch out your idea on paper. [5 min]

Browse **CRITERIA** card and discuss how well your idea scores on each. Improve your idea to better address one or more criteria. [5 min]

Tiles IoT Cards

An ideation tool
for the Internet of Things

http://tilestoolkit.io/cards