

# **Welcome to Demo Day!**

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**AMOS I01**

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# The Professorship for Open Source Software



Project  
served

# Industry Partners and Teaching Projects



**Audi**  
Vorsprung durch Technik



D I T E S T



**BOSCH**

**Continental**



**DATEV**



**methodpark**

**NEWSTORE**



**SOLYP**

**SENACOR**

**SIEMENS**

**sivantos**  
the hearing company



**Volkswagen**

...

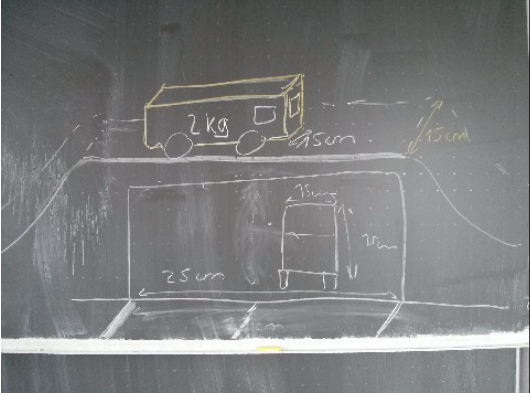
The AMOS Project

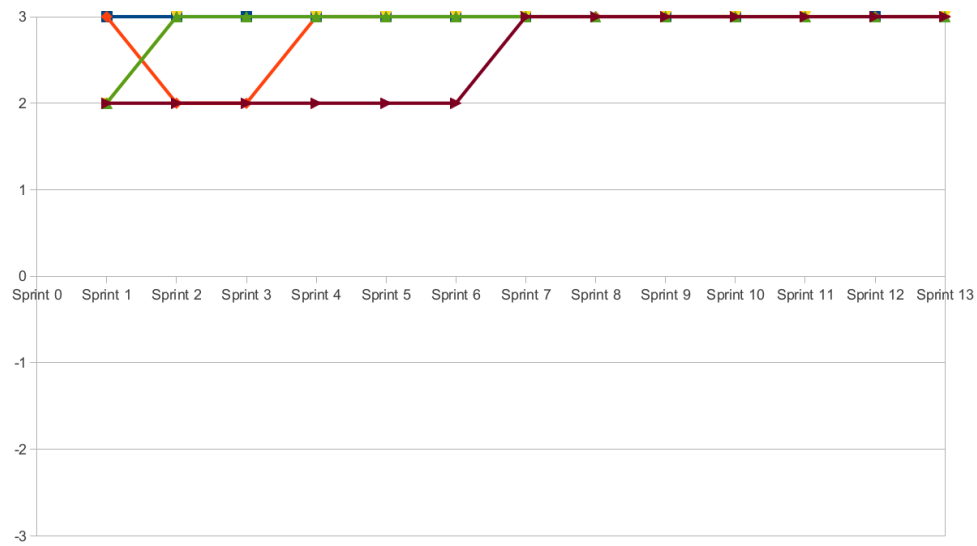
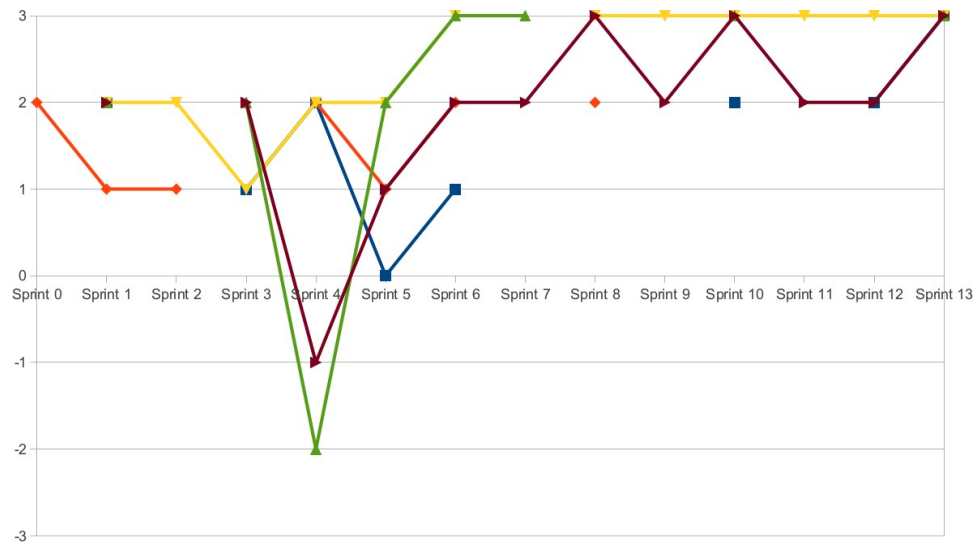
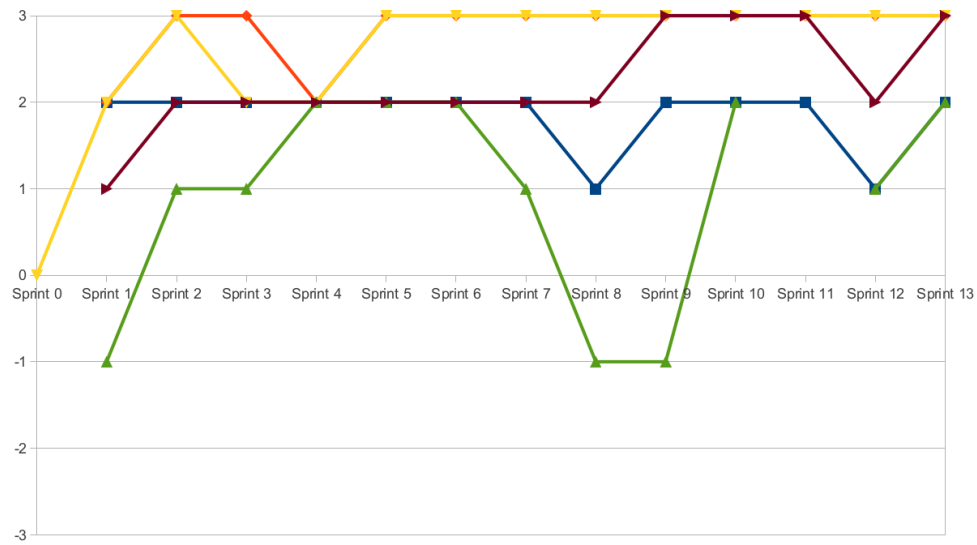
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# The 2021 AMOS Projects

1. EMBA Service (with Siemens Energy)
2. Context Map for Corporate Data (with CPU 24x7)
3. Synthetic File System (with GRAU DATA)
4. Inner Source Project Linter (with DATEV)
5. 3D Viewer (with Büren & Partner)
6. Neural Network Enablement (with Huawei)
7. Bike Nest (with Markus Stipp, entrepreneur)
8. Carbon Footprint Visualization (with Siemens Energy)

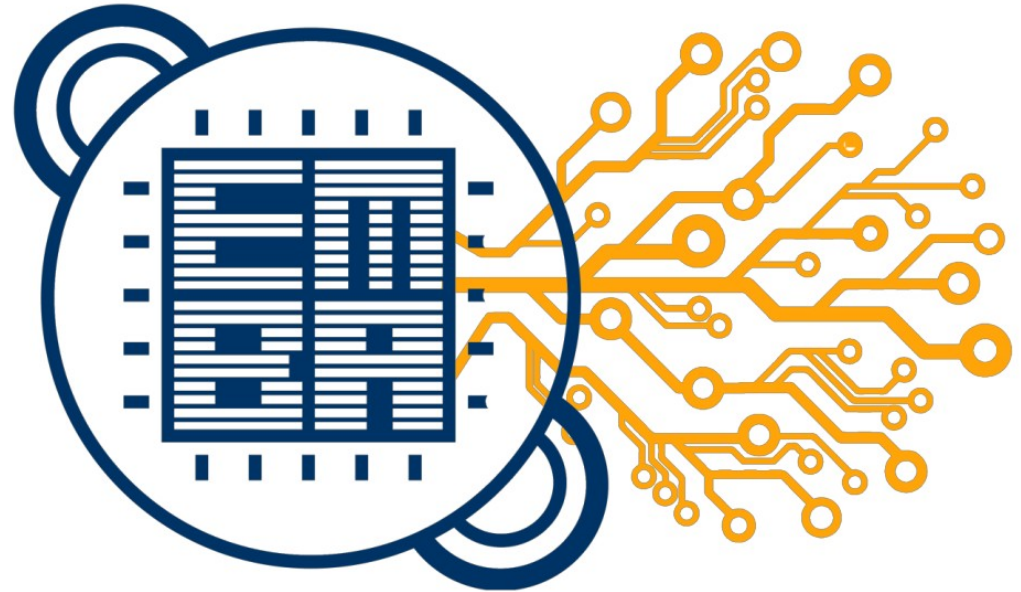






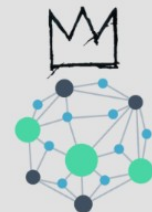
# EMBARk

A containerized service for  
analyzing embedded firmware



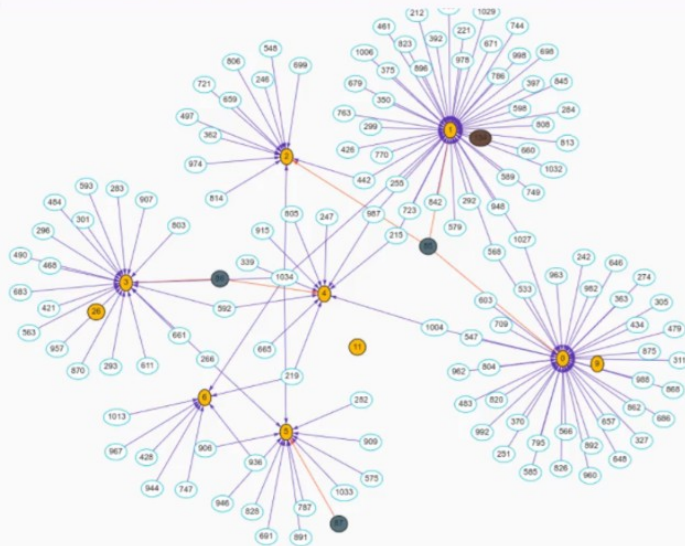


# Welcome to [KMAP]

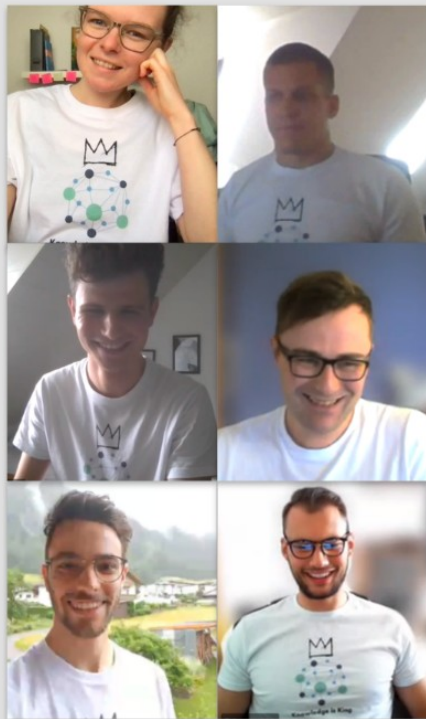


Knowledge is King

A CONTEXT MAP PROVIDING  
**STEP-BY-STEP EXPLORATION.**

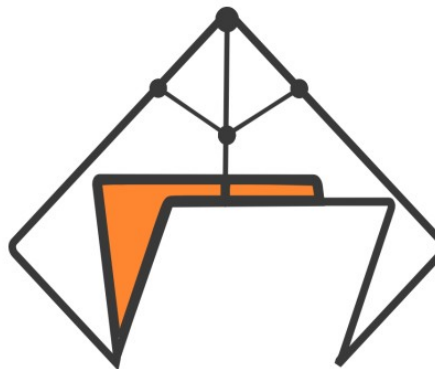


- Turning company data into **valuable insights**
- **Codeless** querying
- Step-by-step **exploration**
- Improve **communication** and **transparency** across companies and along the value chain





# SYNTHETIC FILE SYSTEM



**Find and unlock the true value of unstructured data**



**Transform data into VALUE**



**Reduce search times**



**Get a bird's - eye view about your data**

## What is a virtual file system?

- A virtual file system, is a filesystem, where all the normal filesystem calls, are overwritten and user defined. This can be used to adapt the behaviour of the system when accessing a folder, manipulating its content



## So what do we do with that?

- Our Synthetic File System (SFS) makes use of this virtual file system, to merge the contents of different data sources (like the Metadatahub, some databases, ...) and to display them in one unified view on a filesystem level. It also allows for all the



## And why would you want that?

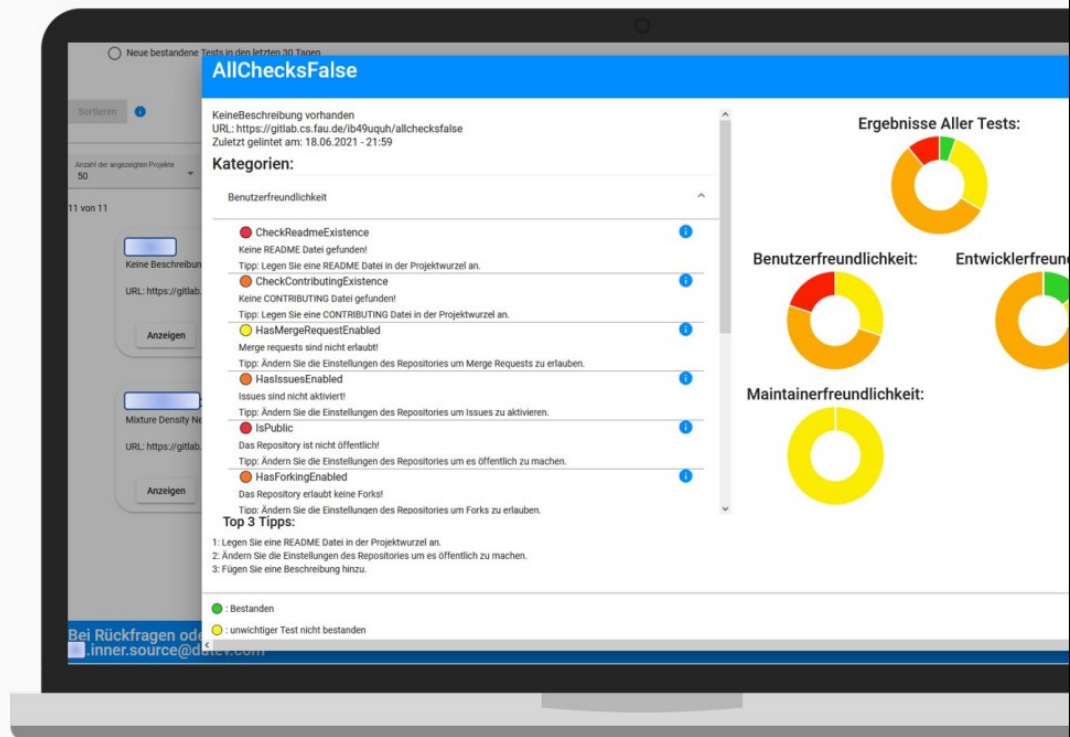
- Metadata can reveal patterns that are often difficult to understand through normal data collection. These patterns are the fuel for artificial intelligence. Good AI needs qualified data which are the result of good metadata management.



# Inner Source Linter

an AMOS project in collaboration with DATEV

We help inner-source initiatives improve their projects and raise awareness of great projects.



# 3D Viewer

# NEURAL NETWORK ENABLEMENT

NETELLA x HUAWEI x FAU

## Objective

- Implementation of a frontend and backend for coloring images and videos using a pre-trained neural network.
- Implementation on an ATLAS 200DK board provided by Huawei.

## Approach

- Development of a web service to manage the files and all user functions as well as to present the results.
- Development of a pipeline for coloring the images and videos.

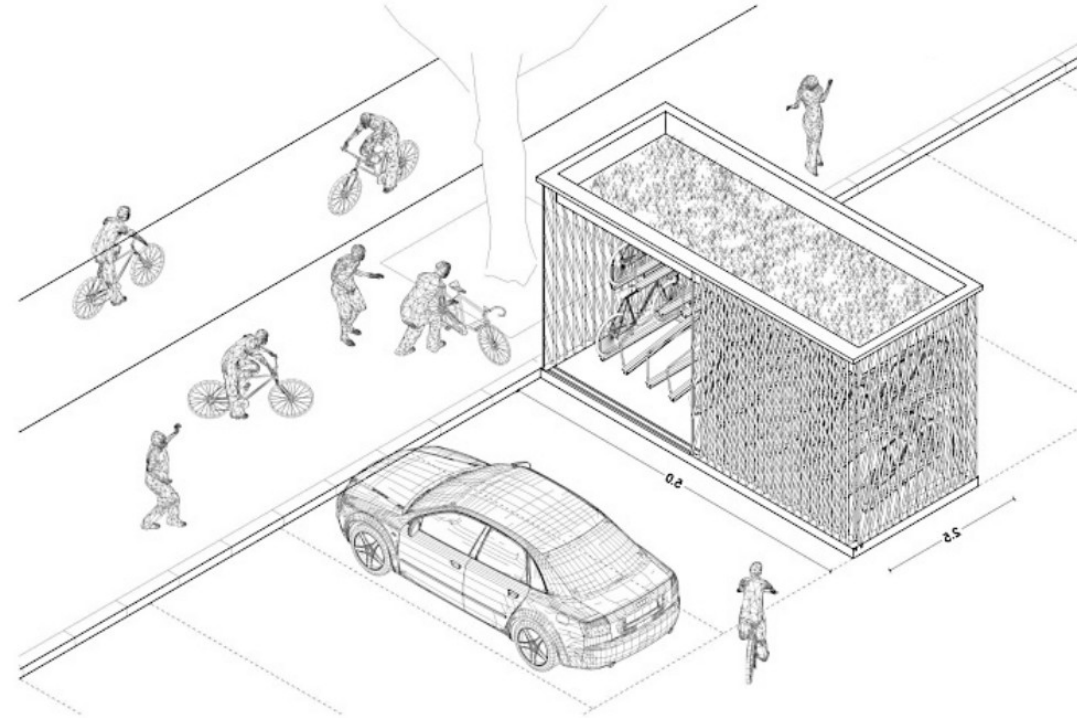
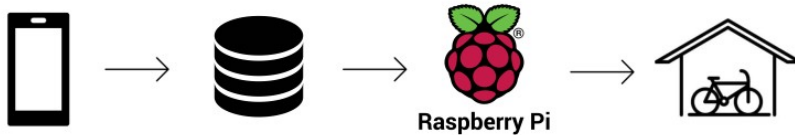
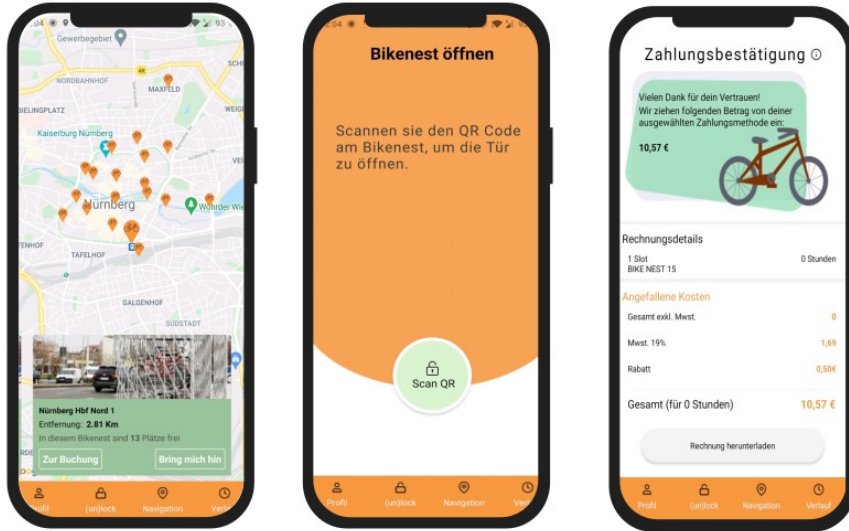
## Result

- Implementation of all functions for coloring the images and videos as well as showing the results side by side.
- Adding a function to preserve the sound for videos.





**BikeNest is a mobile bike storage service, that can be accessed through an application developed by the AMOS Team**





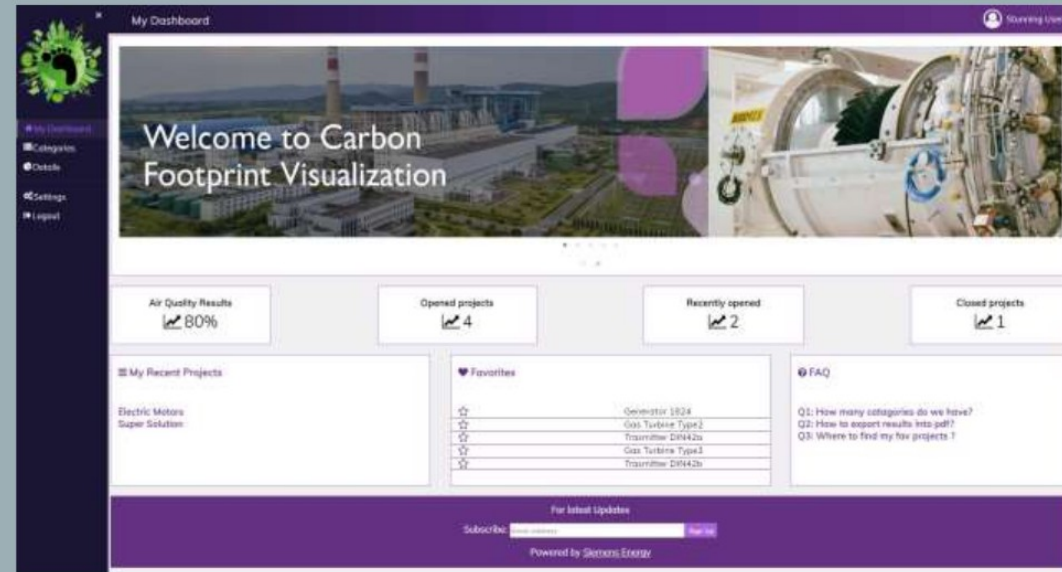
# CARBON FOOTPRINT VISUALIZATION

A carbon footprint is the total amount of greenhouse gases that are generated by the actions of human beings such as deforestation or consumption of fossil fuels. For instance, burning fossil fuels while driving our cars and the use of other kinds of energies in our daily lives adversely affect our ecological life which induces climate change and warming of the Earth.

Its overwhelming adverse effects on our world has become even more challenging in the past couple of years. Therefore, the purpose of this project is to furnish support to our customers by providing a comprehensive architectural overview of the Carbon Footprint Visualization tool for them to visualize their solutions themselves to help them to speed up their business while meeting global challenges such as urbanization, demographic change, climate change, and resource scarcity.



Meet Our Teammates



## Vision

- Calculate the carbon footprint and help our customers to understand the impacts and risks associated with it and offer alternatives.

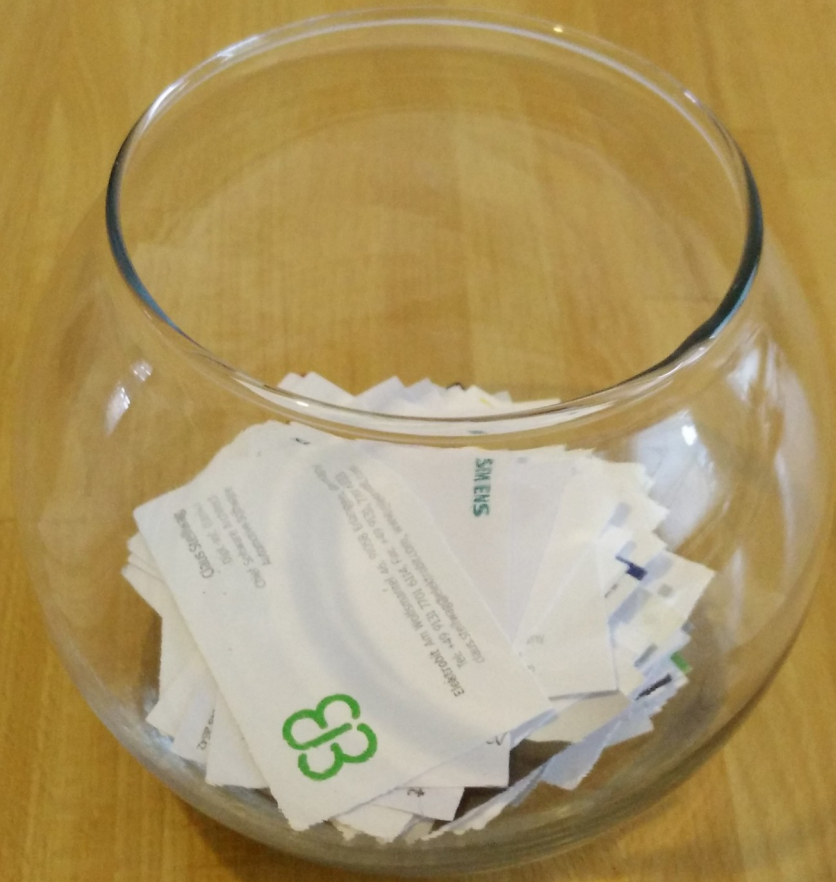
## Mission

- Continually reduce the environmental impact of our activities in order to protect the environment for future generations.

# 2020 AMOS Demo Day Agenda and Rooms

Time	Speaker	Topic
10:15	Riehle	Introduction
10:20	Team 1	Project presentation
10:25	All	Q&A for team 1
10:35	Team 2	Project presentation
10:40	All	Q&A for team 2
10:50	Team 3	Project presentation
10:55	All	Q&A for team 3
11:05	Riehle	Conclusions







# Thank you! Questions?

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- Contributions
  - None yet