



ecoCode

Decarbonizing Software

with Free and Open Source Software

Olivier Le Goaër



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Who I am?

Associate Professor in Computer Science (France)

➡ STEE College (Sciences & Technologies for Energy and Environment)

Research in the field of Software Engineering

➡ How to build “greener” software?

Teaching Android programming

➡ Online course (+130k views)



Green Software

- ✓ **Green-by-design**
is becoming as important as secure-by-design
- ✓ Green software
is **a matter of software quality**
- ✓ **Every component**
of a software system is concerned*
- ✓ Tackle **sustainability** of software
at the code level

**but some more than others*

Work Packages



WP1 - COMPILE best practices

Curated lists of *do's* and *don'ts*

Energy and resources
over-consumption, "fatware", ...



<https://github.com/cnumr/best-practices-mobile>



WP2 - ENFORCE best practices

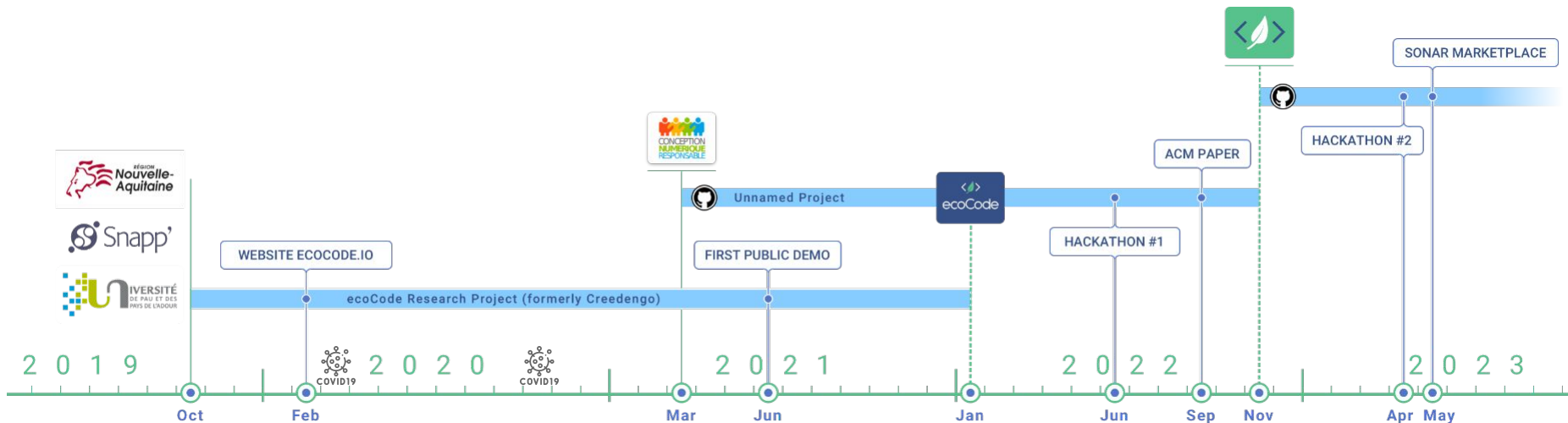
Automated code review

Quality score → Eco-score (A to G)



<https://github.com/green-code-initiative/ecoCode-mobile>

Timeline



Roadmap

Platforms

Android

iOS

Langages

Java

Php

JS

Python

Swift

Rust

Frameworks

Spring
Boot

Angular

React

VueJS

Infrastructures

Kubernetes

 Available Planned

Open Source Software



For researchers

Extend with new approaches

Conduct experimental studies



For teachers

Hands-on workshops, tutorials

Educate now the next-gen developers



For developers

Low impact on development methodology

Easy installation

Open Source Community

