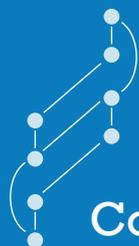




Case Study

IHP × **AirPV**

How AirPV is making the process of going solar easier and better value with IHP



Comhlan



Oifig Fiontair Áitiúil
Local Enterprise Office

What is AirPV?

AirPV is a one-stop-platform for going solar that makes the process easier and better value. A homeowner can simply enter their address, see their solar potential and use the online marketplace to get competitive quotes from trusted installers. AirPV then stays with the homeowner to make sure the system is performing optimally and to help with any maintenance, upgrade and expansion.

The mission is to give homeowners the best experience when going solar. This can only be achieved through constant innovation around customer needs. A guiding goal is to bring the rigour of large-scale solar installations to the residential level.

About AirPV

AirPV is a feasibility project funded by the Local Enterprise Office in Limerick, Ireland and was also studied as part of a MBA thesis in Smurfit Business School, UCD. With the use of IHP, the project was able to create a minimum viable product at the early concept stage and rapidly iterate as the business model and features evolved.

4 weeks

from concept for first version in production

Rapid prototyping

Get to minimum-viable with fast iteration and real-time feedback of customer needs

Low cost

Platform development normally has high fixed costs - IHP lowers and makes variable



Study Outline

The Problem

Only 0.01% of homes in Ireland have solar PV compared with over 10% in other EU countries. The process of going solar is complicated for homeowners and there is large variation in both price and quality. A solar platform can tackle these issues by offering a single portal to the world of solar and, critically, by creating a marketplace for competitive quotes from trusted installers. A homeowner can learn, design, arrange the installation and then get ongoing support - all in the one place.

The challenge for AirPV was to go from concept to live platform as quickly as possible and to rapidly iterate based on user feedback. All on a shoestring budget. The plan was to start off with a homeowner interface and then to build out the marketplace and additional platform features.

Why IHP?

The Solution

The Haskell web framework IHP was chosen because it is designed for the rapid prototyping and refactoring of web applications that are both scalable and feature rich. IHP combined with pure functional programming techniques reduces the number of lines of code that need to be written and maintained and provides a number of compile time assurances of code correctness.

This results in fewer developer cycles required to write, test and deploy application changes and allows the application to keep pace with changing business strategy and feature requirements.

In the initial stages of AirPV there were strict cost constraints. IHP allowed the platform development costs to be kept low and variable by outsourcing to a single specialist developer who could leverage the framework to develop a working prototype fully capable of scaling to production workloads.

Reliability at Low Cost

Results

The ability to refactor and deploy rapidly enabled by IHP and nix allowed for real time development sessions with application stakeholders who could provide feedback on application changes.

Haskell's type system and nix versioning meant the project could remain dormant for variable time periods. The developer could quickly return to the project and begin making productive changes without a long lead in time.

Scalability: compiled application binary is highly performant and simple to deploy.

What's next for Air PV?

The AirPV project is wrapping up the feasibility phase and the next steps are to apply for funding to transition the platform into a commercial offering.



The AirPV platform was built by Comhlan Ltd.

Based in Limerick City, Ireland Comhlan is a young company focused on the design of quality software. IHP is the primary tool Comhlan reaches for to make this happen. Comhlan is an active contributor to the IHP framework and deploys IHP applications in production.



Comhlan is an official digitally induced Platinum Partner

About digitally induced Partners

Digitally Induced partners are top-notch IHP development and consulting companies partners that can help you build fast and well-architected projects with IHP