

Innovation: Considering Cost



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Agenda

- Introductions
- Speakers
 - Robin Day
 - Douglas Baguma
 - Nidhi Pant
- Q&A
- Survey and Closing



Meet our speakers



▶ **Robin Day** – Ebetri Ltd.



▶ **Douglas K Baguma** – Innovex



▶ **Nidhi Pant** – S4S Technologies



Robin Day– Ebetri

13 minutes



Douglas K Baguma – Innovex

13 minutes



Product cost evaluation

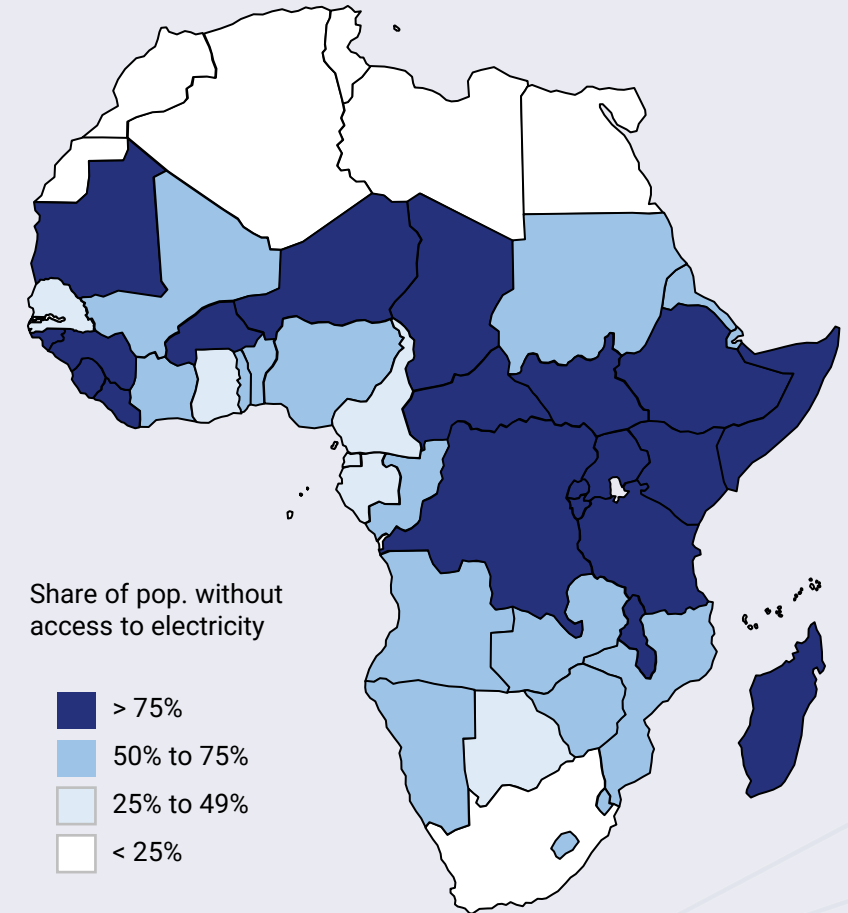
Douglas K Baguma, **CEO**

16th December 2021



About Innovex

Off-grid population



Facilitating the transition to solar energy as a service.

Solar energy is not bridging the electrification gap fast enough for 565 million people

- High purchase prices for solar end-users;
 - To grow, companies rely on person-to-person operations that require huge investments in physical infrastructure and staff.
 - Rudimentary maintenance and payments collections mechanisms.

These high costs must be covered by the end user, thereby making it much less affordable – and accessible – for the rural poor, and (2) solar companies cannot quickly scale their operations to reach more communities in a sustainable way.

Costs

- Cost of goods sold
- Distribution costs
- Sales and advertising costs
- Running costs

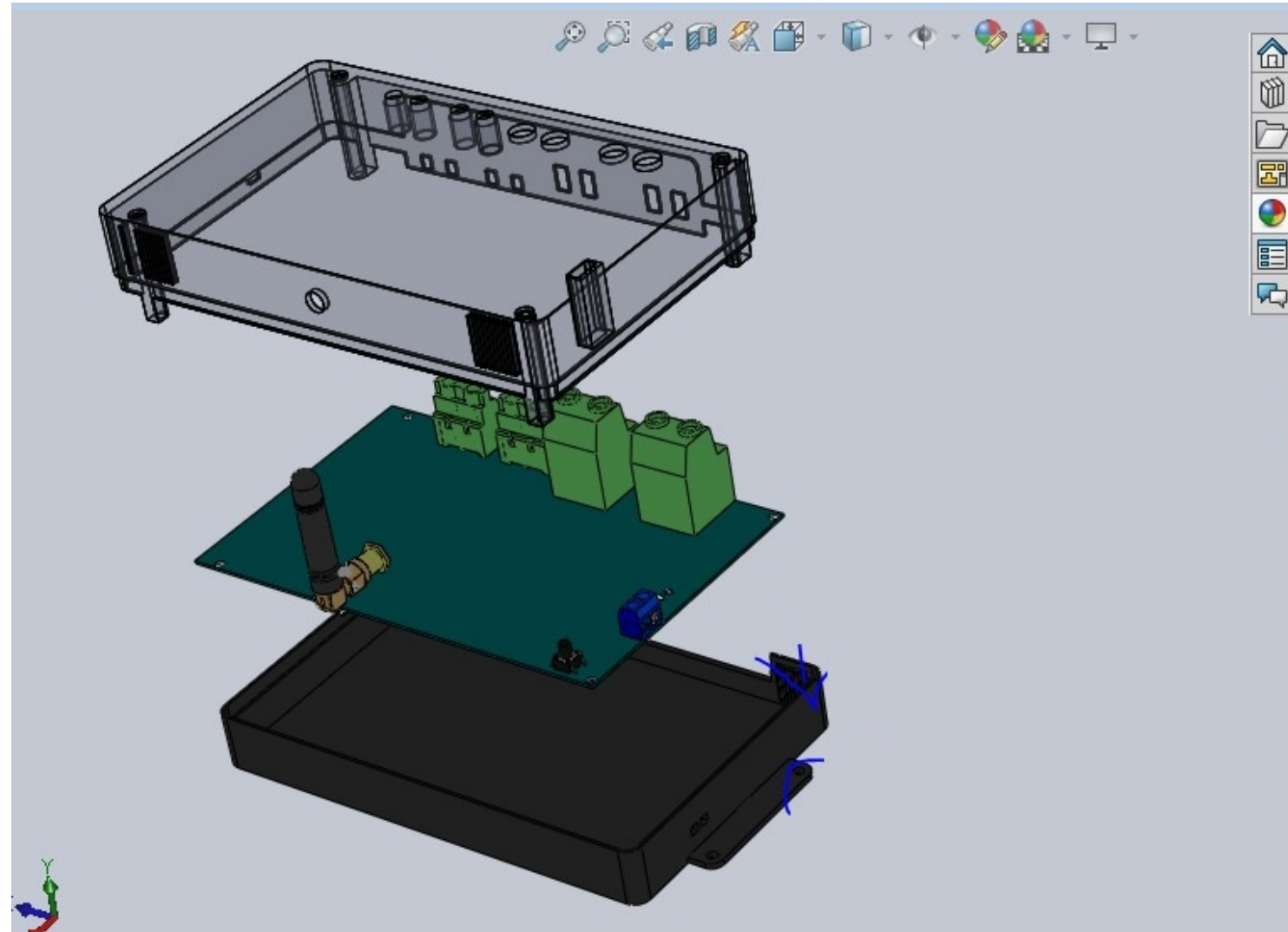
Designing a product

Design determines 50% of product cost

Quality only 5%

Process:

- Identifying a problem
- Solving the problem
- Refining the solution
- Product engineering



Design for Manufacturing:

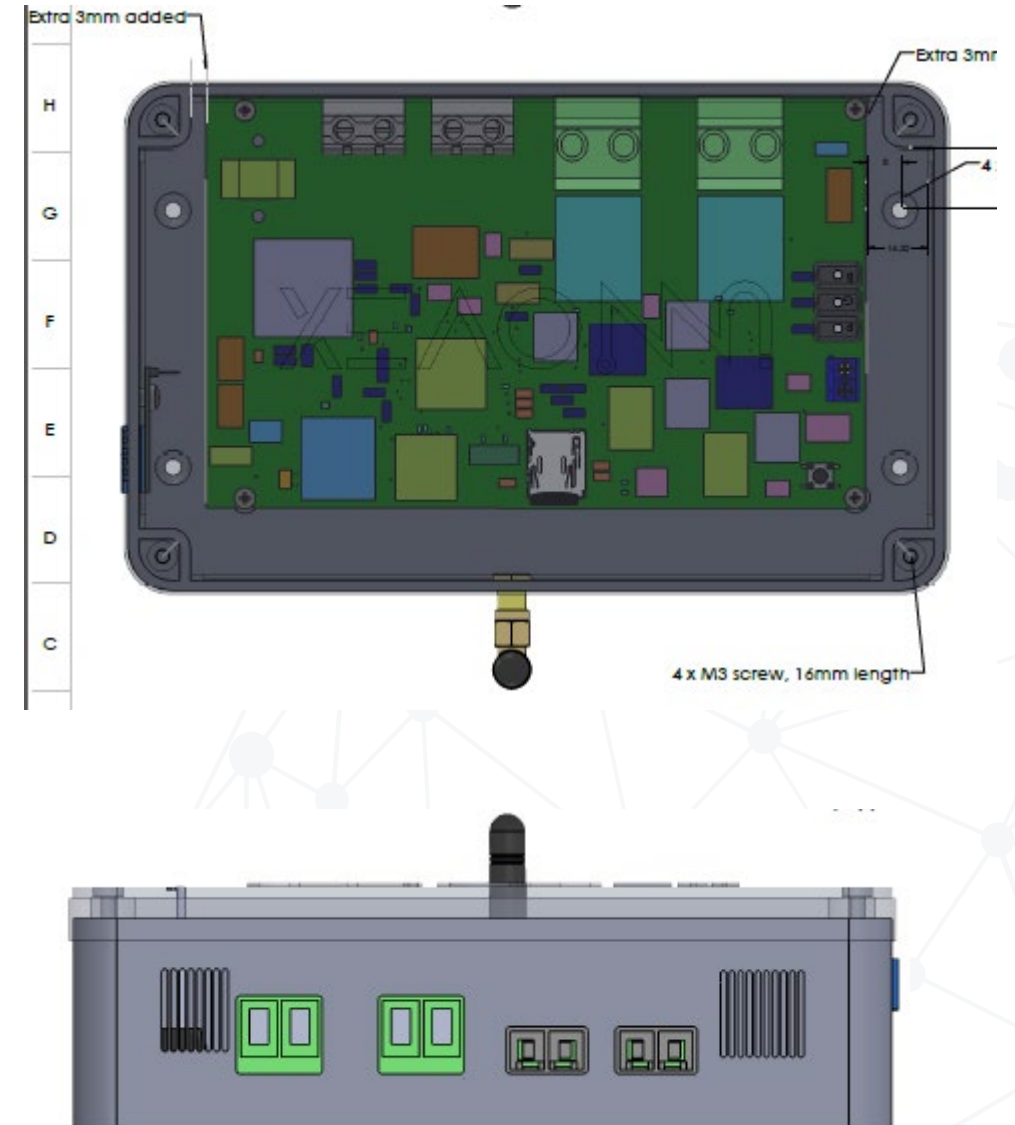
An approach to designing that prioritizes ease of product manufacture over other factors.

- Minimize set-up (fixturing or tooling)
- Use the ideal form of your material

The right materials

Material finishes: Accounting for different pricing for certain material finishes helps to gauge the overall cost of your product's manufacturing process.

Minimize manufacturing waste: Lean manufacturing as a concept centers on the elimination of such wasteful aspects of production as defective products, scrap material, and industrial byproducts.

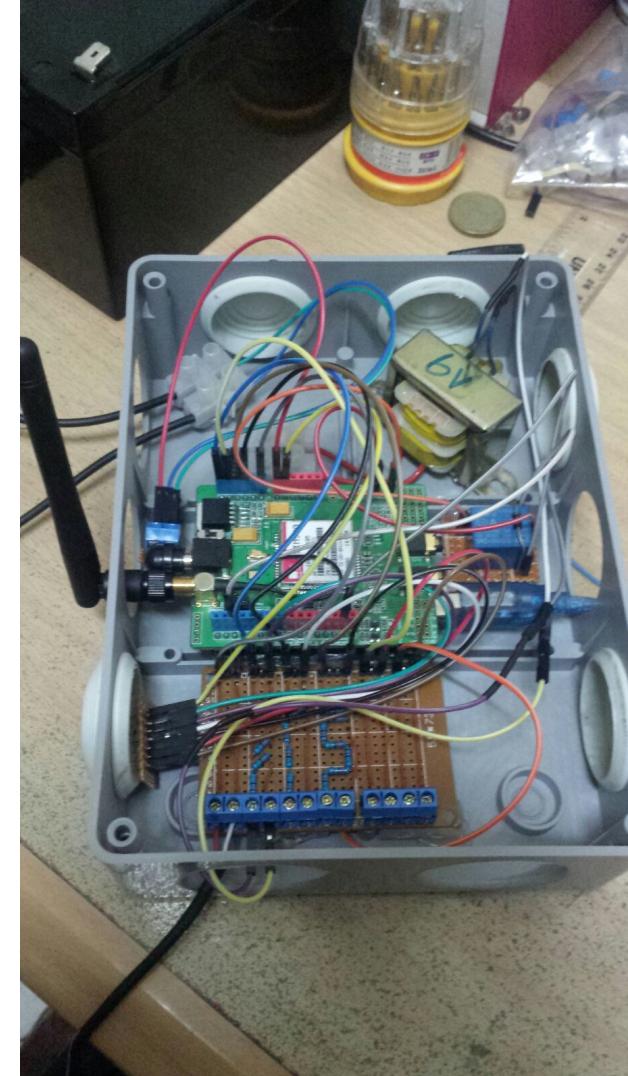
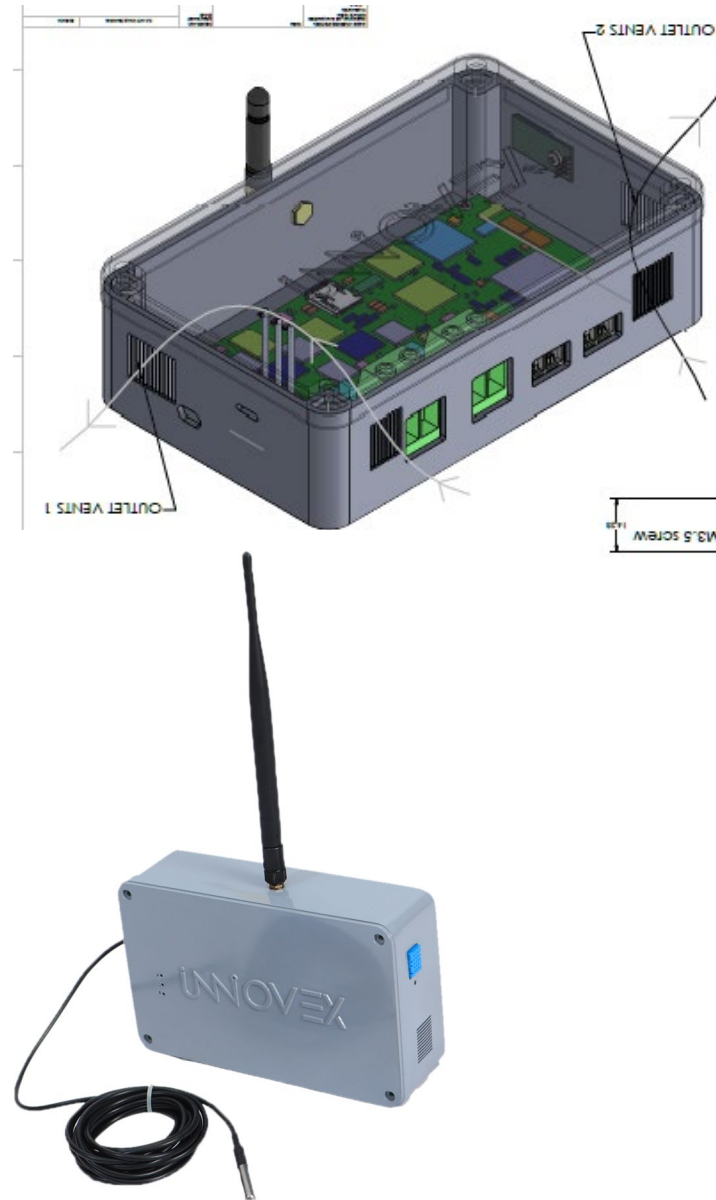


Keep physical prototyping to a minimum:

Physical prototypes are an essential part of any product's development process, but relying on them heavily is costly.

Through the use of iterative CAD development, you can work out a lot of the kinks in your product before you need a physical prototype.

Software-aided performance tests reinforce this possibility with specialized options available to separate industries for stress testing parts and materials with high accuracy.



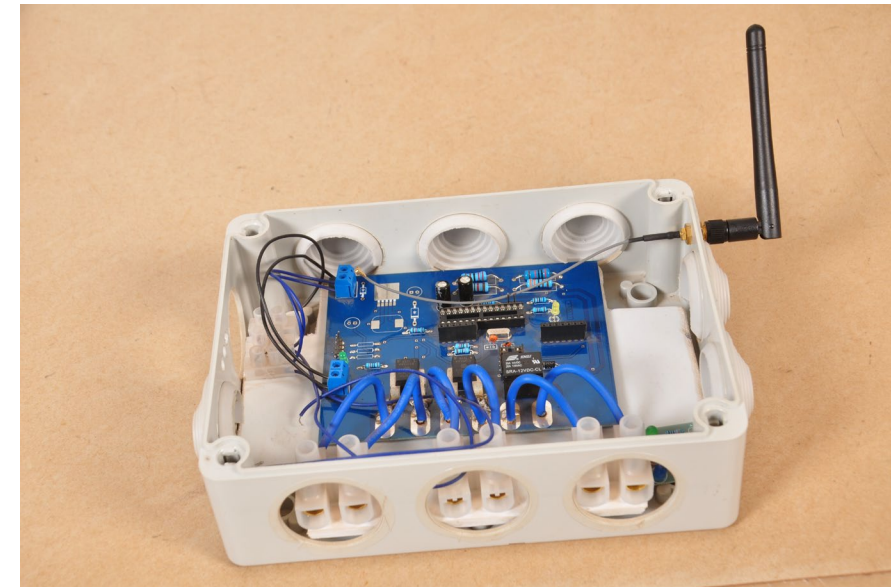
Use off the shelf components:

Incorporating the use of off-the-shelf components into a product's design can help keep costs down in a variety of ways. Due to the amount of time you eliminate from the crafting process by omitting ready-made pieces, the manufacturing price of your product can drop significantly.

Another cost-related reason for considering the use of off-the-shelf parts for your product is the inherent flexibility they allow for in the development process.

Determine your minimum viable product (MVP):

The minimum viable product is a version of your product with the bare necessities needed to get and hold the attention of early consumers. Viewing your product's design through the lens of a minimum viable product ensures you are not overextending in upfront costs without sure footing in the form of customer expectations.



Choose the right manufacturer:

Merely choosing a manufacturer that works best for your business can help tremendously in keeping costs low. Getting samples beforehand can assist in selecting the right factory for production. Samples may be a bit costly to acquire from certain factories, but they can help you to decide if the production quality they offer is what you're looking for before going all in on a full-sized lot of items.

Create a better bill of materials:

A bill of materials is essentially a list of everything needed to create your product and the steps to be taken in the creation process. This document is necessary for serious production purposes and facilitates all stages of development from design to assembly. Improving your bill of materials is likely to come down to encouraging greater collaboration between designers, engineers, and manufacturers.

A poorly designed bill of materials makes for numerous costly mistakes when it comes to material sourcing and manufacturing. With all relevant parties actively communicating about and improving the accuracy of the bill of materials, you can be sure most of these issues will be avoided well ahead of time.



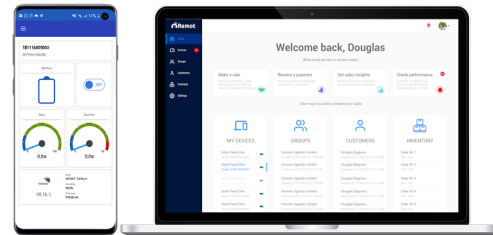
Hardware Vs Software

While in hardware, you aim for low upfront costs in software development, the more upfront investment is more desirable for less running costs

Hardware



Software



Service fee for add-on





Thank you!

Douglas Karubaga, **CEO**

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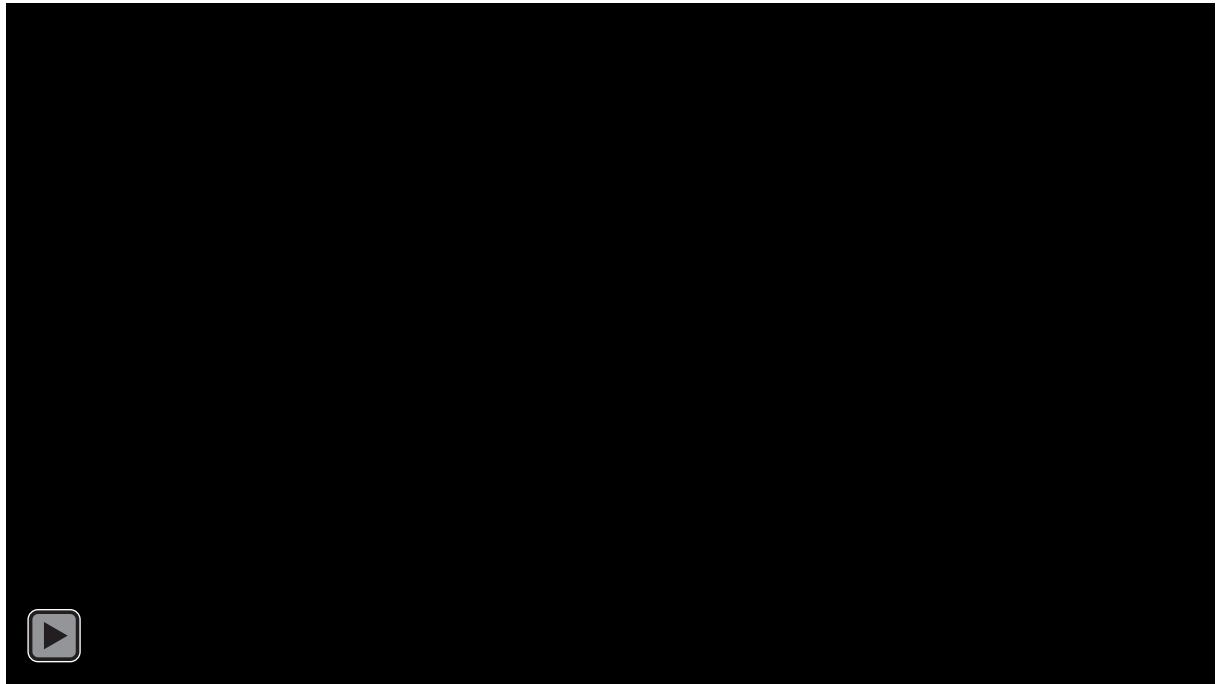




Nidhi Pant – S4S Technologies

13 minutes

Q&A





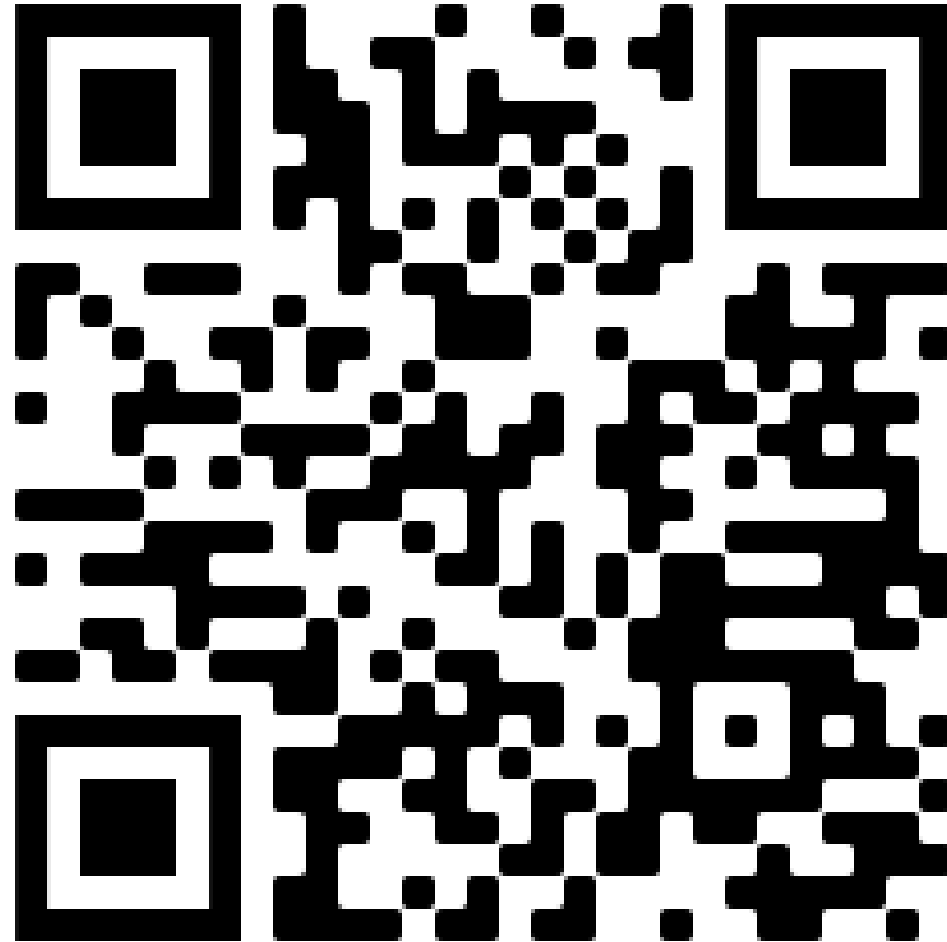
Short feedback survey



[Bit.ly/EforADCFeedbackSurvey2021-22](https://bit.ly/EforADCFeedbackSurvey2021-22)



Newsletter sign up:



bit.ly/DesignChallengeNewsletter



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