Understand it

Apply it

Generate quick win ideas

Check an existing concept

More detail ...

Design wheel

Explore

Create

Evaluate

Manage

Impact map

Performance dashboard

Role-based guidance

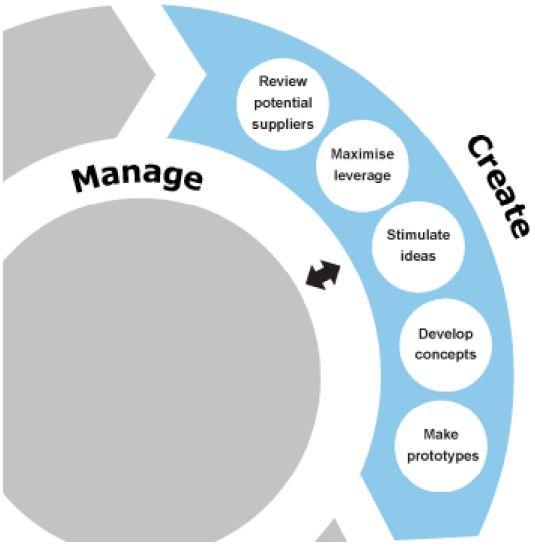
Topic-based guidance

See examples

Create

The 'Create' phase of the design cycle is about developing concepts in order to make things better for the 'priority' performance indicators that were identified within the Explore phase. Ideas should be developed into concepts and then prototyped to enable evaluation.

On this page:



You can click on this map to navigate this page.
Show full Design wheel

Review potential suppliers

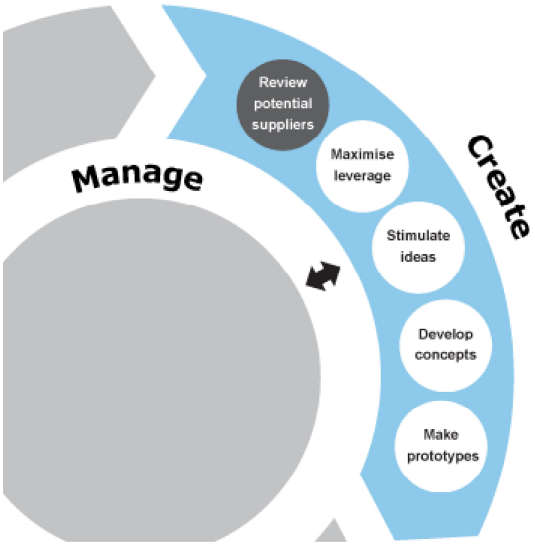
Most products are manufactured by a series of suppliers operating in a long supply chain. The environmental impact associated with the factories of your suppliers is likely to be greater than the impact from your own factories.

Reviewing potential suppliers is about:

- Working with your existing suppliers to reduce their environmental impacts.
- Considering alternative suppliers that can offer step change reductions in the environmental impact.

Working with existing suppliers typically leads to incremental improvements through reduction of waste. Considering new suppliers is typically associated with exploiting a step change reduction associated with a new technology.

Also, consider the social and ethical implications of your suppliers and their working practices, bearing in mind that most supply chains cross national borders. See the Assessing suppliers section for more detail.



'Review potential suppliers' is one of the activities within 'Create'. Show full 'Design wheel'.

Maximise leverage

Identify leverage opportunities for carbon and profit. The environmental impact of ICT products is typically negligible compared to the benefits they can leverage in the wider world.

In particular, ICT products can leverage improvements in 'home energy management' or 'user health and well-being', even if these are not related to their product's primary purpose.

For example, energy consumption of a typical wireless router could be offset by

- Reducing the energy used to heat the average domestic household by 1%, or
- Reducing 80 car miles per year.

Calculation details

From Energy Consumption in the UK, the average household in 2009 used about 17,000 kWh, based on the national consumption allocated across 22 million households. Comparatively, a wireless router uses about 150 kWh per year, and a passenger car uses about 1.8 kWh per mile (derived from this source). All of these figures reflect primary energy consumption.

'Maximise leverage' is one of the activities within 'Create'. Show full 'Design wheel'.

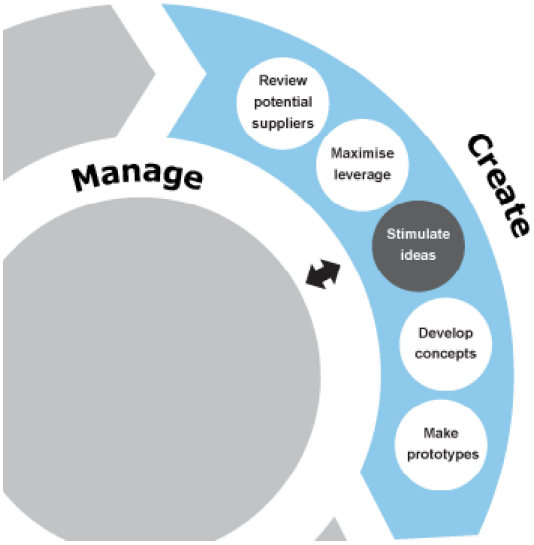
Stimulate ideas

Don't get stuck in old ways of thinking. Start by trying to get as many ideas as possible, and avoid making judgements too early on. Encourage wacky ideas, look for inspiration in unusual places, and ask 'How else could it be done?'.

Most creativity techniques are intended to help break 'fixated' thinking. For example, if asked to design a 'wacky' picture frame, people tend to generate new ideas by starting from an existing picture frame and varying a few of its properties, like the external shape. However, these new ideas are unlikely to be much different from previous ones.

A better approach to designing a 'wacky' picture frame would be to use an analogy, like a flower, and then then think how this shape could be used to display pictures. Impractical ideas often spur realistic ones that are much better than those that could be obtained through sole consideration of the possible.

As a stimulus for ideas, use the Impact Map to look for opportunities where the 'waste' could become 'food' for another business, and consider how 'end-of-life' triggers within the User journey could be resolved in a manner that minimises environmental impact while maximising revenue for the business.



'Stimulate ideas' is one of the activities within 'Create'. Show full 'Design wheel'.

Further Information

Many tools are freely available online to help with idea generation. Some examples can be found in the Creativity Tools section of MindTools and the Creativity and Innovation Techniques section of mycoted.

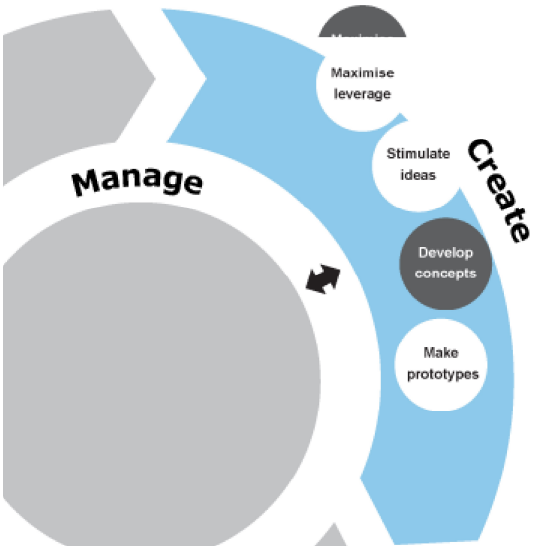
Develop concepts

Developing concepts is the process of combining together different ideas to make a complete

solution that can be compared to the benchmark chosen within Explore.

A systematic approach to concept development first involves grouping the underlying ideas that are related. A starting set of concepts can be created by selecting one idea from each group, either through purposeful selection, or randomly.

Refine the concepts by thinking through the consequences for the user and business stakeholders, real-world scenarios of use, and flows of materials and energy that were identified within Explore. Aim for at least one 'safe' concept and at least one 'crazy' concept.



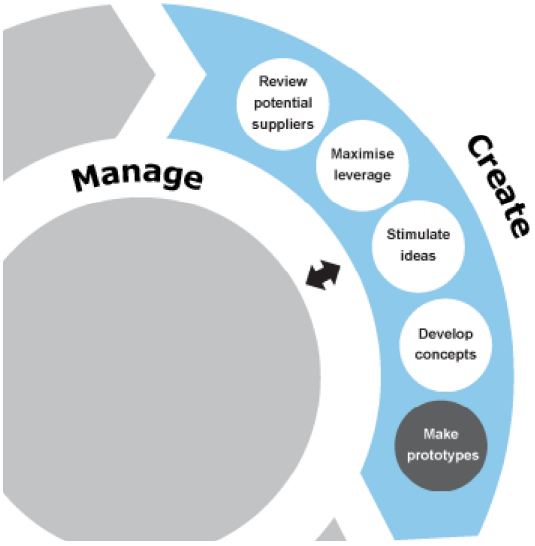
'Develop concepts' is one of the activities within 'Create'. Show full 'Design wheel'.

Make prototypes

Making prototypes involves producing physical or virtual demonstrations of a concept. The fidelity of the prototype should match its objectives, which can include:

- Communicating the potential look and feel.
- Simulating how an interaction would occur.
- Enabling evaluation and refinement.
- Demonstrating technical feasibility.

Prototypes can include sketches, or cardboard / foam models. Interactions can be prototyped using PowerPoint to 'draw' screenshots that show how an interaction would occur, which is surprisingly effective. Quick tests with rough 'paper' prototypes are vital to gather feedback before all the important decisions are finalised.



'Make prototypes' is one of the activities within 'Create'. Show full 'Design wheel'.

Further information

See the Prototyping page of the Designing with People website, and the Prototyping page of Usability.gov (for software / web development).

Next section: Evaluate

Review
potential
suppliers