



## What is a Constraint?

Design constraints are limitations on a design. These include imposed limitations that you do not control, and limitations that are self-imposed as a way to improve a design.

### Nick De Leon - Royal College of Art UK, School of Design

Nick leads the development of the School's research and knowledge exchange relations. He received his PhD from Imperial College Business School, where his research addressed the impact of information and communication technologies on the social and economic vitality of cities. Nick has an engineering degree from Imperial College and a Master's degree in Industrial Design from the Royal College of Art.

Nick began his career as an industrial designer at IBM, moving from designing products then services, through to developing entire new businesses in his role as Business Development Director for IBM's Global Services division in Europe.



### Nick De Leon Video

If you have not watched the Week 2 video with Ted Tagami and Nick De Leon, please do. In this video Nick discusses constraints. Video link [click here](#).

**'Every constraint is a gift. It is a gift that enables you to show your creativity and capacity to innovate.'**



A designer's approach to a problem begins with an acute observation of the users and of the system's context and constraints.

Constraints may be:

- Technological
- Spatial (physical dimensions)
- People (communities)
- Social
- Commercial (affordable)

Combinations of designing something that is not only technically feasible and exciting, but is truly desirable and commercially viable should be your aim.

**'Every constraint is an opportunity to innovate'**

**'If you give a group of people complete leeway to design anything, they will design nothing'**



### Ted Tagami - CEO Magnitude.io

The impetus is on the customer like Magnitude.io to have well formed constraints to provide to the designers. So that it is not an uninhibited mission to do anything you want.

You need to have very specific constraints. For example a CubeSats constraints could include ;

- Volume
- Mass
- Deadlines
- Materials
- Cost