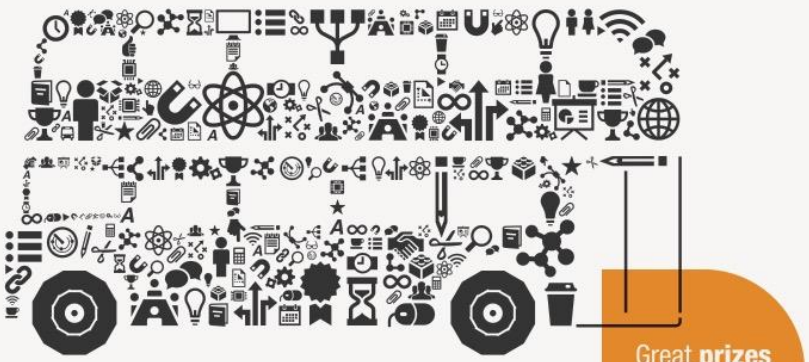
CMS CREATE

A TWO-DAY EVENT TO CHALLENGE YOUR CREATIVITY



Great **prizes** to be **won!**

see website for details

19th - 20th November 2015

IdeaSquare, CERN

Design and develop an interactive exhibit to enhance the visitor experience at CMS Point 5, Cessy

cern.ch/cms-create

Open to all young CMS members

Goal:

Produce a piece of hardware that will illustrate, for the general public, and kids in particular, what CMS does and how it does it.

Participants:

4 teams of
CMS members + IPAC students

Jury
Corinne Chaumontet Head of **OTPG**
Patrick Parquet Head of **IPAC Design**
Anne Dabrowski **CMS**

Evaluation Criteria
30%: Suitability for visits
30%: Educational content
30%: Product design
10%: Reproducibility

Team 4 = Team Muon
LED strips used to represent the function of a Muon chamber

Team 3 = Team Greane
An interactive projection of CMS shows how particles interact with the detector

Team 2 = Jump for a Pic
Visitors become 2 colliding particles to discover what happens immediately after collisions.

Team 1 = Bosonisaurus
Visitors are guided through the discovery of the Higgs using an interactive board game

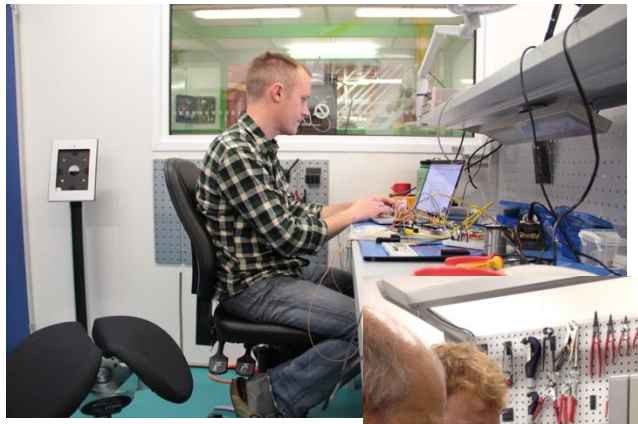
Diversity
25 participants
15 nationalities
36% of women
4 teams = 4 totally original Exhibits
2 IPAC students per team

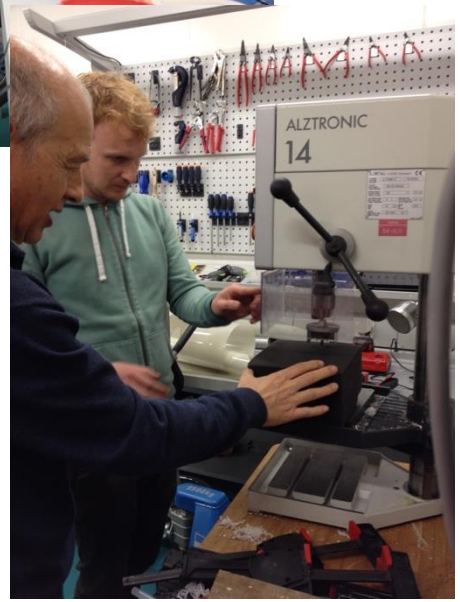
A 33hour team project supported by advisors

CMS scientists (and guides)
Senior product designers
Tourism professionals

Pizza party included

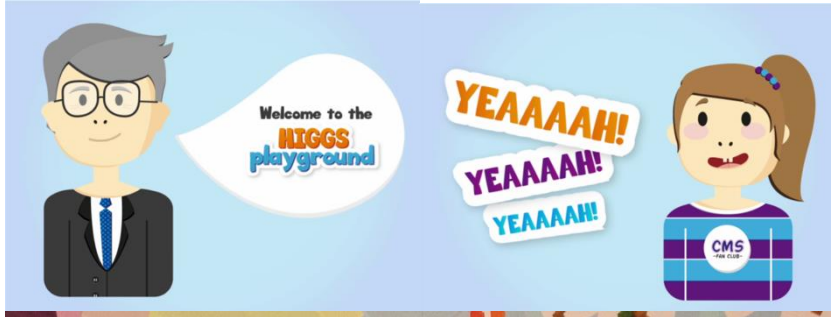
Conceptual design → Prototyping → Presentation





The Winners!!

Team 1: Bosonisaurus



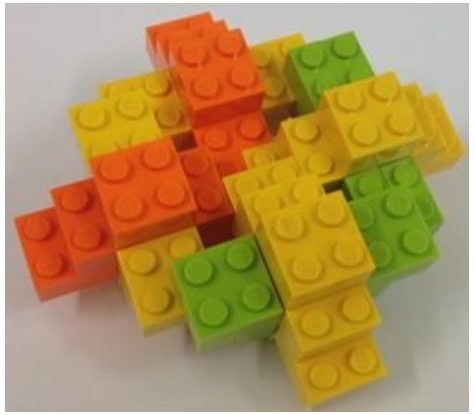
The Higgs Playground
(Getting the Eureka effect)

- The Playground
  - The centerpiece of the exhibit
  - Stylized CMS, gentile and engaging
- The Animation
  - Kind professor needs help finding the Higgs
  - Designed to attract kids and to show how blocks go together
- The Blocks
  - Energy deposits in subdetectors, color-coded, V-shape
  - Interlocking with magnets (currently just LEGO)
  - The main idea: Build particles in the right form starting from deposits ▸ shape sorter to check whether the resulting particle is a Higgs

The prototype is being turned into a full exhibit and will be installed at Point 5 by April


Z bosons


Higgs

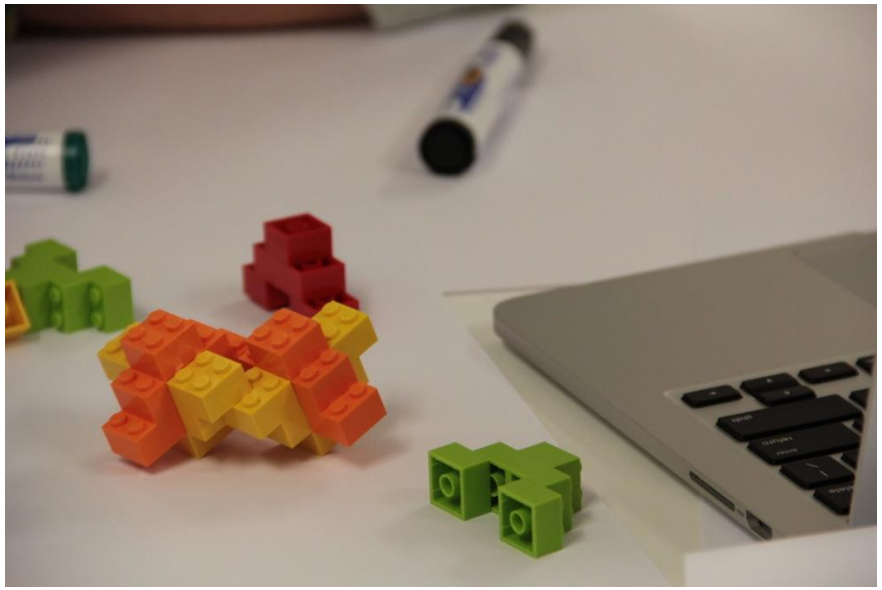


Building the Exhibits

The Higgs Playground

Currently two prototypes have become reality

- Board Game Professionally printed onto a rigid durable plastic
- Building blocks tested and 3D printed
- Thanks to Maf and the P5 technicians for building a support structure which allows the boards to be freestanding and portable
- Tested by Stephanie Beauceron in Lyon 9-10th of April
- An instruction manual is being put together so that the exhibit can be recreated by anyone in the collaboration



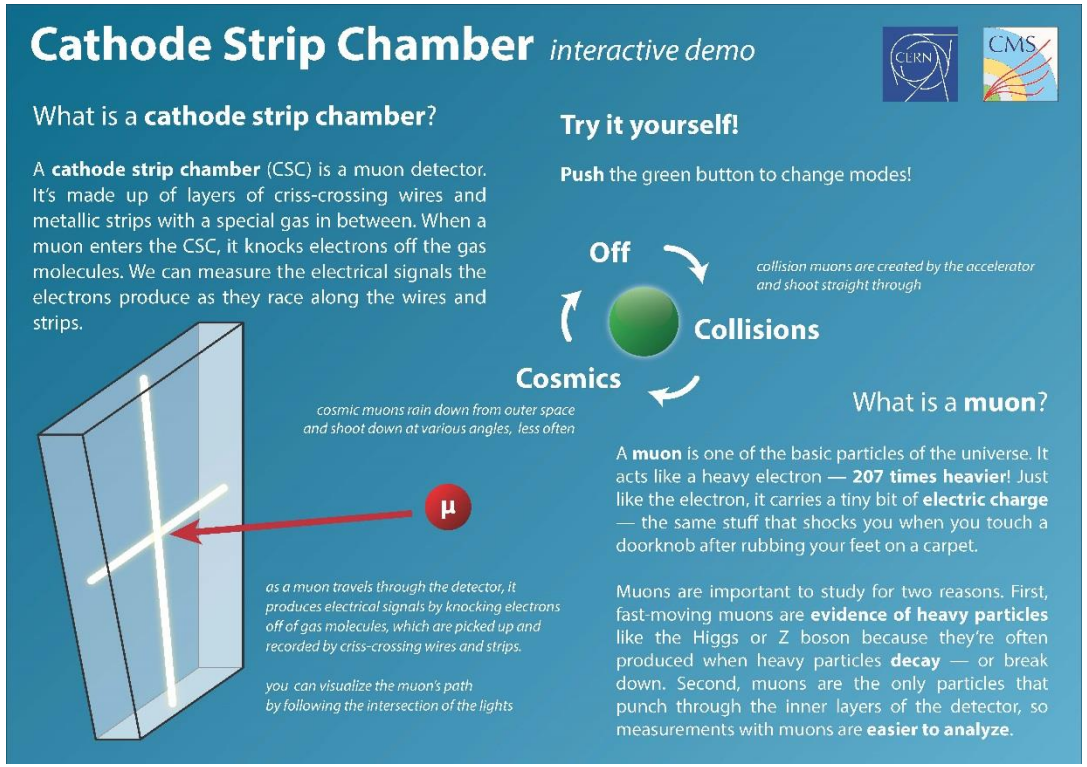
Feed Back from Stephanie

- context of the ‘Geek and Japan Touch’ event was not necessarily appropriate
- Expect it to be very well received when positioned at CMS as the visitors will be able to appreciate the background information much better
- May be preferable to have different shapes for different deposits

Building the Exhibits

Currently two prototypes have become reality

Muon CSC exhibit



- Built by team 4 to demonstrate how Muons interact with the CSC detectors within CMS
- 2 Modes Cosmics and Collisions
- Accompanied by an informative poster
- Installed in the Peter Sharp room at Point 5
- Only been set up for use b the guides this week so haven't yet received any feedback

Thank You for your attention … and look out for edition 2016

More information: cern.ch/cms-create
Any Questions?

We couldn't have done it without….

- Sponsors:
  - CMS Communication
  - CMS Technical coordination
  - IdeaSquare
  - Host states relations
- Event support team:
  - Maf Alidra (Machining)
  - Lars Roedne (Logistics)
  - S. Beauceron, C. Lazaridis, A. Lanaro, S. Buontempo (CMS advisers)
  - Constatinos Hoursoglou (Product Design - IPAC)
  - Corinne Chaumontet (Tourism expert - OTPG)
  - Oliver Keller (Electronics)
  - Joona Juhani Kurikka & Harri Toivonen (3D printing)
- Other CERN outfits for their support:
  - Graphic design, EDU, COM, LOG