

Transforming the CMS Experiment site into a family village during CERN Open Days 2019



Marzena Lapka, on behalf of the CMS Collaboration
ICHEP2020: 40th International Conference on High Energy Physics, Virtual World, 31 July 2020

Key numbers

1 year of organization

2 days public event (14 & 15 Sept 2019)

1 day internal event (13 Sept)

visits for CMS and CERN community
concert underground (evening)

15+ core team

315 volunteers

18 activities

8 000+ visitors



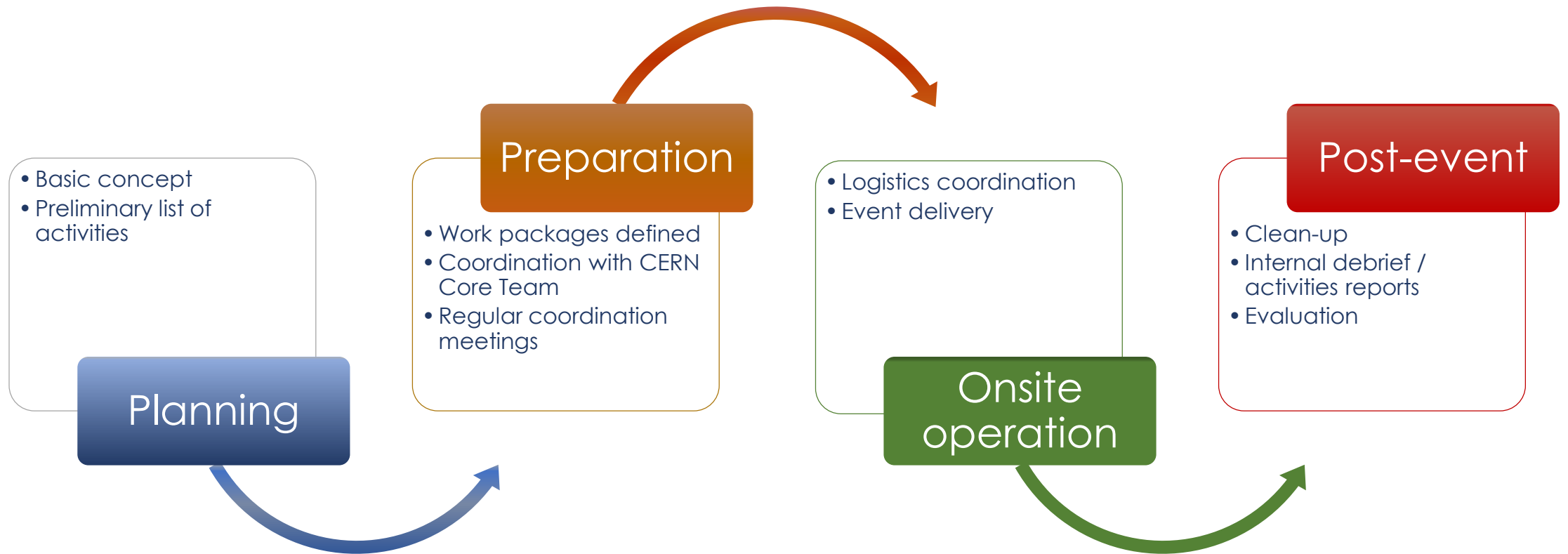
Goal: to occupy visitors for 3-4 hours

CMS is placed 15km from the CERN main site, where the majority of activities took place →

no easy access to activities that were taking place on the main site



1 year of organization



Three-day event



18 activities

<https://opendays.cern/site/cms-point-5>

1. **Underground visits**
2. Transport show
3. High Luminosity LHC
4. Kapla
5. Virtual Reality
6. Building CMS with Lego
7. Programming robots
8. Tactile Collider
9. Particle Identity Game
10. Rescue demo
11. Fire brigade museum
12. CMS art exhibition
13. Detector alignment techniques
14. Scientific shows
15. Detector technologies
16. Fun with physics
17. Scientific talks
18. Exhibition on Cosmic Ray Discovery with Balloons



Virtual Reality



Tactile Collider



Detector technologies



Fun with physics



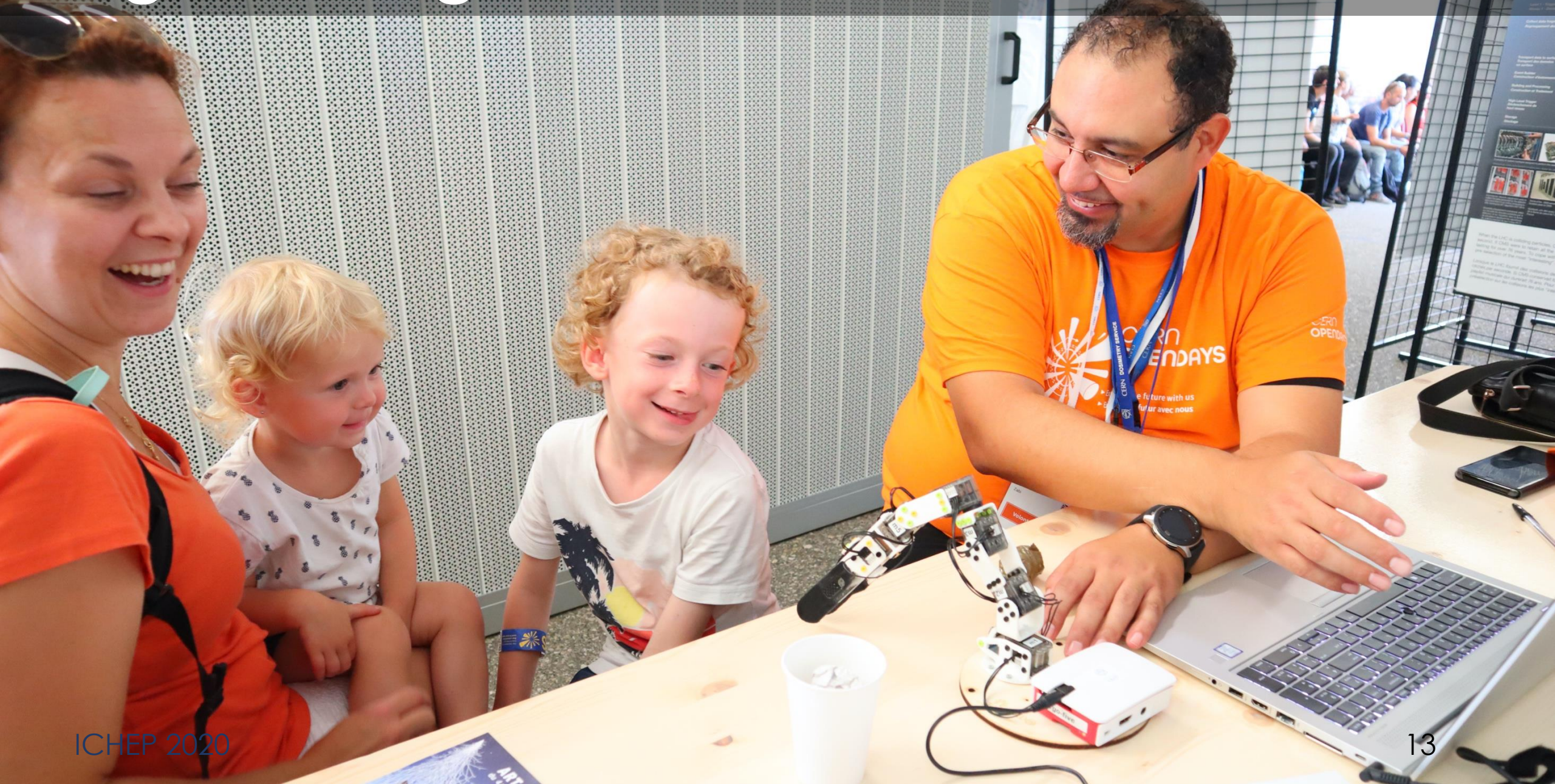
Constructing parts of the CMS detector with Kapla wooden blocks



Rescue demonstration and workshop



Programming robots



Building the CMS detector with LEGO



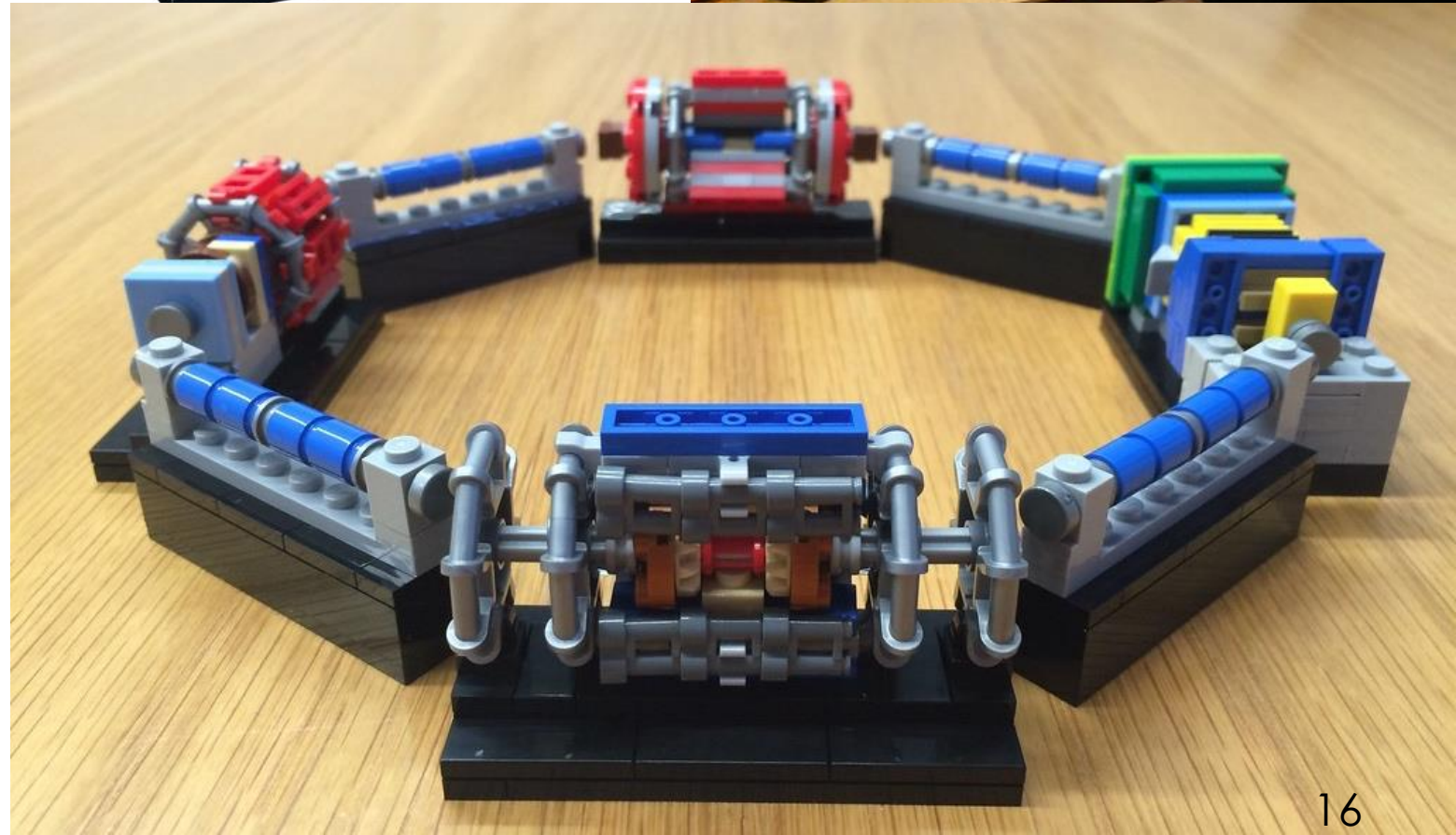
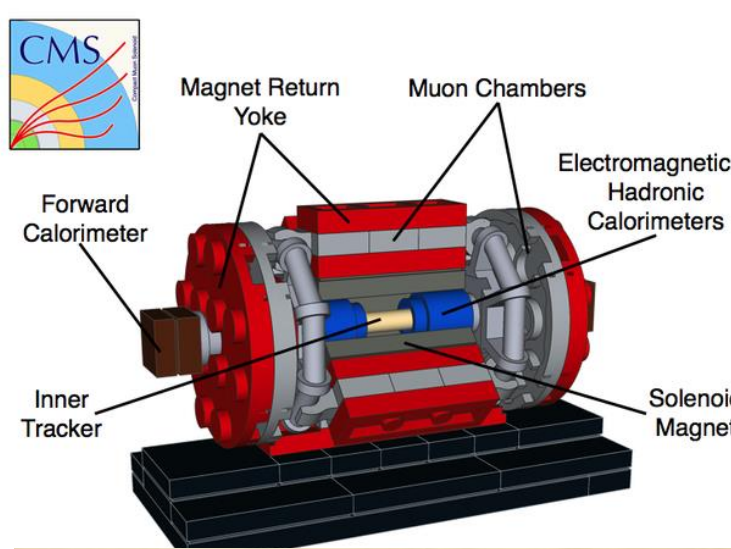
Underground visits



New: LEGO Activity

- Developed by Nathan Readoff, ATLAS PhD student **University of Liverpool**
- A pocket-version of the Large Hadron Collider (LHC) made out of Lego
- Other detectors are also available

<https://build-your-own-particle-detector.org/models/lhc-micro-models/>



New: LEGO Activity

- We ordered bricks for 500 models and we were giving away 250 models per day to children below 14 y.o.
- The Lego bricks were sourced individually and we were sorting the bricks into sets.
- Making an order on LEGO pick-a-brick website is not so trivial



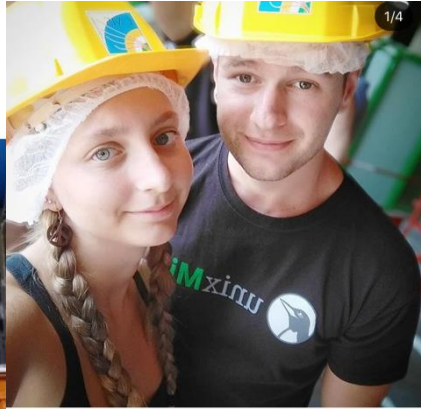
Social Media

- Limited number of posts per day to not spam those who cannot attend
- Used the Instagram stories functionalities as a main channel, so those who are interested could follow
 - Each Story had 1k views
 - 2 LIVE from the cavern (~300 people watched)
- **#MyCMSVisit** launched
 - Two selfie points with instructions on how to share the photos
 - Posters with hashtag on the site (great publicity of the hashtag by the volunteers in the grouping tent)



New: #MyCMSVisit

Greetings from Geneva!
Over the weekend I had the rare opportunity to visit #cern CMS and ATLAS particle detectors, 100 metres below the ground.
#mycmsvisit @ Centre International de Conférences, Genève - CICG



70 likes
_pink_laura #cern #mycmsvisit
1 day ago



31 likes
mfcadacosta #mycmsvisit
charles_urca Uma explicação ajudaria...
2 days ago · See Translation
alanzeer · Follow



16 likes
andrea_o.bass #mycmsvisit
2 days ago



128 likes
praskevushka My dream came true and I have visited CMS detector at CERN! #mycmsvisit It's my second time in CERN and there is so much to... more



One of the sites where the Higgs boson was first detected.
#history #myCMSvisit



73 likes
malindasds Happiness is seeing some things you worked on while at CERN being installed at CMS #SummerStudent2016 #MyCMSVisit #CernOpenDays



Back to CMS!! <3 #myCMSvisit @CMSEExperiment

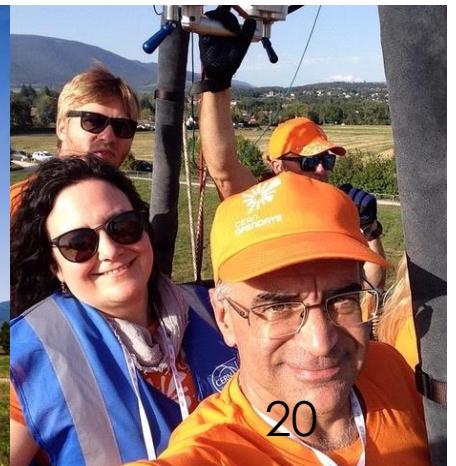


Happy volunteers = happy visitors

- ✓ CMS family & friends visits on Friday
- ✓ Hot-air balloon rides (reserved for the volunteers)
- ✓ CMS music playlist
- ✓ Charity food stand
- ✓ REGA helicopter landing demo



<https://open.spotify.com/playlist/5GD7YwhhLSX8GFByd8jCm8?si=DSz7vCs1T329VeAzmPgi-w>

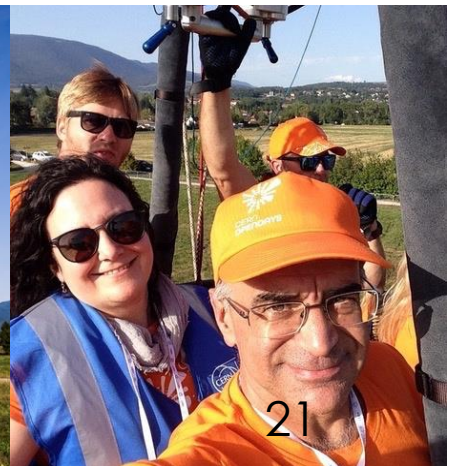


Key features

- ✓ Flexibility
- ✓ Positive spirit
- ✓ Whats' App group with the Core Team
- ✓ Quiet room
- ✓ Food tracks on site
- ✓ Safety first



<https://open.spotify.com/playlist/5GD7YwhhLSX8GFByd8jCm8?si=DSz7vCs1T329VeAzmPgi-w>



What did our visitors think?



2019 CERN Open Days Highlights at CMS

<https://www.youtube.com/watch?v=g mz U la NT dd M>

THANK YOU

Acknowledgements:

Thank you to:

- Niels Dupont, CMS Open Days Site Coordinator
- CMS Open Days Core Team
- CMS Open Days Volunteers

A large group of people, mostly wearing orange t-shirts, are gathered in a large industrial hall. They are all cheering with their arms raised in the air. In the background, there is a massive, circular, multi-layered structure, likely a particle detector, with a complex, radial pattern of components. The hall is filled with various pieces of equipment and structural elements.

Any questions?