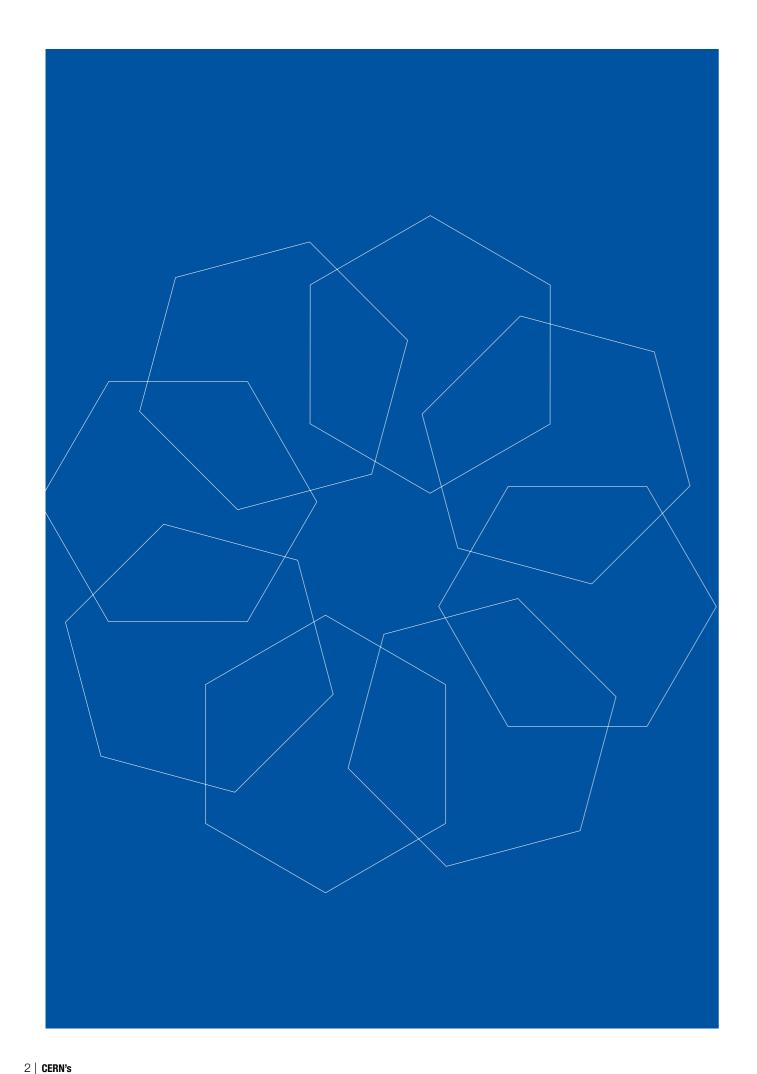


CERN's
Communications
Strategy
2017-2020





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### INTRODUCTION

This document outlines CERN's four-year communications strategy, covering the mandate of the current Directorate. The 2017-2020 CERN Communications Strategy was approved by the CERN Enlarged Directorate in February 2017.

In any organisation, the role of communications is to plan strategically in order to enhance the organisation's ability to operate and achieve its strategic goals. Through communications, an organisation manages and sustains relationships with key audiences and takes responsibility for its reputation.

Communications consists of the dissemination of information by a variety of specialists and generalists in an organisation. So it is that many people communicate about CERN, for different reasons, in many different ways and using different media. The strategy described here does not concern itself with all these strands of communication, but rather with the main pillars of strategic communication that CERN should deliver and in which it should invest its resources. It is thus a strategy for the core CERN Organization, rather than its collaborations (experiments), Member States or users (individuals and institutes). Nevertheless, these groups are often both targets for and partners in CERN's communication, and thus are crucial participants in its development.

The strategy **encompasses both internal and external communication** and is underpinned by CERN's scientific and operational goals for 2017-2021, as defined in the CERN Medium-Term Plan and in the European Strategy for Particle Physics. It has also been informed by the results and recommendations of an independent study carried out by an external partner and, crucially, by input from CERN departments, the communications and outreach teams of the experiment collaborations, the EPPCN (European Particle Physics Communication Network) and IPPOG (International Particle Physics Outreach Group).

The Education, Communications and Outreach (ECO) group within the Organization's International Relations sector will take the lead on the development and execution of the strategy, in close collaboration with the CERN Management, departments and all internal stakeholders.

# CERN AND COMMUNICATIONS AT CERN

CERN, the European Organization for Nuclear Research, is an intergovernmental organisation with 22 Member States. It is situated on the French-Swiss border, with its headquarters in Geneva.

CERN is widely recognised as one of the world's leading laboratories for particle physics. At CERN, physicists and engineers probe the fundamental structure of the universe. To do this, they use the world's largest and most complex scientific instruments – particle accelerators and detectors – to study the basic constituents of matter – the fundamental particles – and the forces that shape the universe.

Close to 13 000 scientists from research institutes all over the world use CERN's facilities for their experiments. Research carried out at CERN has made major contributions to the field of particle physics. In 2012, two experiments at CERN – ATLAS and CMS – announced the discovery of the elusive Higgs boson, the until-then missing piece of the Standard Model, which encapsulates our best understanding of the behaviour of all fundamental particles in the universe. This discovery led to François Englert and Peter Higgs being jointly awarded the 2013 Nobel Prize for Physics for their theoretical work on the Standard Model.

While the Large Hadron Collider (LHC) is the flagship of CERN's accelerator complex and the results of the LHC experiments are often in the limelight (for example, the discovery of the Higgs boson), CERN has a very diverse research programme, covering a wide range of physics topics, from the Standard Model to supersymmetry, from dark matter to cosmic rays. Thus, experiments at other accelerators and facilities both on-site and off are an equally important part of the Laboratory's activities. Supporting all the experiments is a very strong theory programme, which carries out cutting-edge research in theoretical particle physics.

Communicating CERN's mission and achievements has been core to the Organization's strategy for over a decade. The 2017-2020 Communications Strategy thus builds on well-established and highly successful communications, education and outreach programmes at CERN, which have:

- contributed to CERN being recognised as not only a world-leading research laboratory in particle physics but also a centre of excellence in science, engineering and computing and an example of multinational collaboration;
- established CERN as one of the first ports of call for international media;
- confirmed CERN as a source of inspiration and learning for teachers and students:
- made CERN part of popular culture, inspiring scientific curiosity amongst the general public across the globe;
- confirmed CERN as one of the best global models for scientific collaboration in the name of peace.

# GOALS OF THE COMMUNICATIONS STRATEGY

The period covered by this Communications Strategy follows a highly eventful and exciting period of technological and scientific achievements, both at CERN and in particle physics more widely. The start-up of the LHC in 2008 and the discovery of the Higgs boson in 2012, for example, have had an enormous impact not only within the high-energy physics community but also in terms of raising awareness of CERN and of particle physics amongst the general public.

Looking forward, three major communication challenges have been identified for CERN:

- Maintaining interest when faced with the potential scarcity of "big breakthroughs" on the scale of the discovery of the Higgs boson and the completion of the Standard Model.
- Securing understanding of and support for the ambitious future accelerator programmes deemed necessary for the search for new physics and for the long-term future of CERN, particle physics and fundamental research.
- Reacting to the inherent ups and downs of experimental results.
   Overhyping of new results accompanied or followed by inflated criticism may lead to a loss of credibility for the field.

These challenges present important opportunities to communicate:

- the diversity of CERN's scientific programmes beyond the LHC and the accelerator complex;
- the scientific process (hypotheses and theories, experimental data, critical thinking, peer-review, open discussion), the "grey areas" of particle physics research and how scientific breakthroughs are often the cumulative result of small advances;
- · the technological advances that are made in the search for new physics;
- the impact of CERN on society.

Thus, the overall objective of the CERN Communications Strategy is: to help ensure the long-term future of CERN's mission and share it with society.

This overall objective may be broken down into the following goals:

- Contribute to maintaining and increasing support from current Member States.
- 2. Contribute to attracting new Member and Associate Member States (in line with the current strategy for scientific and geographical enlargement).
- 3. Maintain high public awareness and engagement with CERN's activities.
- 4. Foster community-building efforts within both CERN and the international particle physics community.
- Raise awareness of and provide information about CERN's societal impact
- 6. Enable CERN to serve as an effective voice for fundamental research in relevant multilateral debates and with the public.

## COMMUNICATIONS ARCHITECTURE

The foundation of any effective communications strategy is a clear and concise articulation of the organisation's **vision and mission**. From these, the organisation's **positioning**, **strategic themes and messages** can be developed for use in all communications activities.

An organisation's vison and mission derive from its strategic goals. In CERN's case, we divide these into scientific and "beyond science" goals.

CERN's **scientific goals for the period 2017-2021** (as laid out in the Medium-Term Plan) are:

- · to fully exploit the LHC during its high-luminosity phase;
- to maintain and continually update a diverse, complementary scientific programme serving a broad community, including contributing to longbaseline neutrino projects outside Europe;
- to prepare for a post-LHC high-energy accelerator project through design studies (CLIC and FCC) and a vigorous accelerator R&D programme (AWAKE and others).

#### CERN's "beyond science" goals are:

- to be a politically neutral voice for science, advocating investment in fundamental research and evidence-based policy;
- to build further links with industry in terms of the transfer of knowledge from CERN to industry;
- to train a new generation of scientists and engineers;
- · to inspire and nurture scientific awareness in all citizens.

#### **CERN's vision**

CERN's vision is articulated as:

to gain understanding of the most fundamental particles and laws of the universe

This statement underscores the fact that CERN is first and foremost a research laboratory for fundamental physics. This is the "core business" of the Organization, around which all its other activities are built.

#### **CERN's mission**

The following statement articulates how C ERN intends to achieve the above-mentioned vision.

#### **CERN's mission is:**

- to provide a unique range of particle accelerator facilities that enable research at the forefront of human knowledge;
- to perform world-class research in fundamental physics;
- to unite people from all over the world to push the frontiers of science and technology for the benefit of all.

This mission statement can be summed up using the following keywords that encapsulate CERN's raison d'être: **Research. Innovation. Collaboration. Inspiration**.

#### **Themes**

In the communications architecture, themes carry the platform for CERN to spread its messages and tell its stories.

Four themes capture CERN's essence:

#### 1. Discovery through science:

- This is reflected in the three strands of CERN's scientific strategy.

#### 2. Technological innovation:

- CERN innovates new technologies for high-energy accelerators, detectors and computing.
- CERN-based innovations have applications in other domains.

#### 3. Diversity of people:

- People of more than 100 nationalities from across the globe work at CERN.
- Their academic and professional backgrounds are extremely diverse (science, engineering, computing and others).

#### 4. Inspiration and education:

- CERN trains future scientists, engineers and technicians.
- CERN motivates school students to pursue the study of science.
- CERN inspires scientific awareness among citizens.

#### **Target audiences**

An organisation's target audiences derive from its core business and operational objectives.

CERN is mandated by the CERN Convention to provide information for and regularly update the high-energy physics community and the Member States on its activities.

Although not officially mandated to communicate with other groups, it is undoubtedly in CERN's interests to communicate and engage with a range of different audiences that are vitally important for CERN to achieve its mission.

Several of these audiences are also stakeholders in CERN's activities; that is, they directly contribute to CERN's present and future (Member States and the CERN community are two examples of stakeholders).

The following target audiences have been identified for CERN:

- Governments and policy-makers:
  - of the Member States
  - of potential new Member States and Associate Member States
  - of the Host States
  - of other international organisations
- · The international particle physics community, including:
  - research institutes and universities
  - physicists
- The broader international scientific community
- · The media and influencers
- Teachers and students (from pre-university to graduate)
- The local community
- · The general public (citizens)
- The CERN community (including CERN employees, students, associates and contractors' personnel)

- · Potential candidates (students, graduates and professionals);
- · CERN alumni
- Industry
- · Donors (individual citizens, corporations and foundations)

#### Key messages

In this section, we outline the overarching key messages (targeting all audience groups) that CERN wishes to convey as well as the more granular key messages for each target audience.

#### Primary key messages

- 1. CERN is a world leader in particle physics.
  - (This encompasses theoretical and experimental research, engineering and computing.)
- 2. The discovery of the Higgs boson opens the door to new physics, on a journey of discovery that will extend for decades.
- 3. To continue this journey of discovery, we need new accelerators, detectors and computing capacity.
- (To build them we need to push the boundaries of technology.)
- 4. CERN brings benefits to society.
  - (CERN contributes to the human endeavour of acquiring knowledge and it has a strong positive impact on training future scientists and engineers, on driving innovation, on transferring knowledge and technology to society and industry, and on engaging citizens in the achievements of fundamental research.)
- 5. CERN is an open institution.
  - (CERN's scientific results are available in open access and CERN is committed to open innovation. CERN is open to citizens and to the arts, humanities and other expressions of culture.)
- 6. **Peaceful collaboration and diversity** are intrinsic to CERN. (People from different nationalities, cultures and backgrounds and with different expertise collaborate peacefully, on an equal footing.)

#### Messages for each target audience

Audience	Drivers	Messages
Governments and policy-makers in Member	Scientific excellence	CERN is one of the world's leading centres for particle physics – it produces cutting-edge science and technology.
States	Economic and social impact	CERN is an integral part of a Member State's national research efforts; it is your national laboratory at the international level.
5.5.1.5.5	Return on investment	CERN continues to train generations of scientists, technicians and engineers worldwide.
	(Re-)election	The upgrade of the LHC to the High-Luminosity LHC is a priority for CERN. It will significantly enhance the accelerator, potentially allowing a new chapter of
	Job creation	particle physics to be explored.
	Inspiration for STEM (science, technology, engineering and mathematics)	The particle physics community is developing an ambitious vision for next-generation facilities following the huge success of the LHC.
	Influence on global scientific agenda	CERN is a key actor in delivering transparent and responsible research.
		CERN operates with a comparable budget to a medium-sized European university.
		CERN is an ideal showcase for knowledge transfer: it gave us the World Wide Web and has been a pioneer in other technologies, such as touchscreens and
		PET scanners.
		The unique know-how and expertise of CERN scientists and engineers is the key to effectively bridging the gap between fundamental research and its applica-
		tions.
		CERN engages and promotes SMEs and start-ups, and supports their growth through its network of business incubation centres.
		Half of CERN's annual budget returns to industry through procurement.
		CERN consistently strives to deliver environmentally responsible research, both through how it operates and through the results it produces.
		CERN adheres to the highest standards of health, safety and security.
		Teachers and students in your country have greater access to inspiring, cutting-edge educational resources and training.
Governments and policy-makers in potential	Scientific excellence	Becoming a member of CERN enables far greater involvement for your scientists, engineers and technicians.
new Member States/Associate Member	Economic and social impact	Becoming a member of CERN provides your industries with access to large engineering projects.
States	Return on investment	CERN enables participation in world-changing scientific projects that would simply not be possible on a national basis.
States	(Re-)election	Teachers and students in your country will have greater access to inspiring, cutting-edge educational resources and training.
	Inspiration for STEM	Being associated with CERN will contribute to creating a critical mass of particle physicists in your country, building and nurturing the community.
	Influence on global scientific agenda	CERN is an ideal showcase for knowledge transfer: it gave us the World Wide Web and has been a pioneer in other technologies, such as touchscreens
	militarios di giordi colonimo agonad	and PET scanners.
International particle physics community	Scientific excellence	CERN is at the forefront of particle physics and technology.
(individual physicists and institutes)	Peer recognition	CERN is the heart of an international network. It is a melting pot of collaborations and partnerships.
(marvidual priyolololo and motitates)	Funding	CERN actively develops the tools for the future of particle physics research.
	Inspiration for STEM	CERN is a laboratory dedicated to the particle physics community, and will always strive to serve the community better. It is your laboratory and we will build
	mophation for C12.	our future together.
		Each one of you plays an important role in maintaining support for CERN and for particle physics.
		CERN inspires and trains generations of scientists, technicians and engineers worldwide.
Broader international scientific community	Scientific excellence	CERN has made major contributions to answering humankind's fundamental questions about the universe.
Broader international defortance defining many	Inspiration for STEM	CERN is a centre of excellence for particle physics and technology, including computing.
	Funding for fundamental research	CERN hosts 70% of the world's particle physicists. It is a melting pot of collaborations and partnerships.
	Influence on global scientific agenda	CERN collaborations are models for grass-roots, distributed, large-scale approaches to big science.
	imidence on global coloniale agenda	CERN is at the forefront of developing technologies that could benefit other areas of research.
		CERN inspires and trains generations of scientists, technicians and engineers worldwide.
		CERN is a powerful standard-bearer for fundamental research and its role in society.
Media and influencers	Frontier science	CERN is the world's leading centre for particle physics – it produces cutting-edge science and technology.
wedia and initidencers	Cutting-edge technology	CERN is a unique place that contributes to answering humankind's fundamental questions about the universe.
	Public interest	CERN is a hub of expertise in particle physics, engineering and computing.
	Authoritative source	CERN has built and runs some of the largest scientific instruments in the world.
	Authoritative source	The results of the work carried out at CERN are available to everyone.
		Fundamental science is a key driver for innovation and applied research.
		The work at CERN across all three pillars – physics, engineering and computing – has a meaningful impact on society.
		CERN is the heart of an international network. It is a melting pot of collaborations and partnerships.
		CERN inspires and trains new generations of scientists, technicians and engineers worldwide.
		CERN adheres to the highest standards of health, safety and security.
		CERN consistently strives to deliver environmentally responsible research, both through how it operates and through the results it produces.
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Audience	Drivers	Messages
Teachers and students	Being updated on current research in particle physics	CERN is a unique place that contributes to answering humankind's fundamental questions about the universe.
(from pre-university to graduate)	Continuing professional development	Fundamental research is a driver for science education.
, , ,	Inspiration	CERN is one of the world's leading centres for particle physics.
	Wonder	CERN has built and runs some of the largest scientific instruments in the world.
	Belonging to a network of shared interests	At CERN, people from all over the world collaborate, transcending barriers of age, religion, gender and nationality.
		The results of the work carried out at CERN are available to everyone.
		You (as a student) could participate in CERN's research, now or in the future.
		Our science has the power to inspire your students.
		CERN lays the groundwork for collaborations between students and teachers from many different countries.
Local community	Economic benefit	CERN is one of the drivers of economic and cultural development in our local area.
	Tourism	CERN is world famous and puts a positive spotlight on our region.
	Impact on the environment and on individuals	CERN adheres to the highest standards of health, safety and security.
		CERN consistently strives to deliver environmentally responsible research, both through how it operates and through the results it produces.
		We take our place in the community seriously. We work closely with local institutions and authorities, for the CERN of today and tomorrow.
		CERN organises dedicated events and has specific channels to engage with the local community.
		We are working to ensure a bright future for CERN
General Public	Curiosity	CERN is a unique place that contributes to answering humankind's fundamental questions about the universe.
	Impact	CERN has built and runs some of the largest scientific instruments in the world.
	Wonder	Fundamental scientific research is a driving force for technological innovations that impact our lives, such as the World Wide Web.
	Knowledge for empowerment	At CERN, people from all over the world collaborate, transcending barriers of age, religion, gender and nationality.
		The results of the work carried out at CERN are available to everyone.
		We take our place in society seriously. We want to engage citizens with our work.
		CERN adheres to the highest standards of health, safety and security.
		CERN consistently strives to deliver environmentally responsible research, both through how it operates and through the results it produces.
CERN community	Pride	CERN attracts the brightest minds and some of the most talented people in the world.
	Curiosity	We are part of a bustling, dynamic, international and diverse community, united by shared values.
	Community spirit	All of us play a role in CERN's amazing discoveries and share in the Laboratory's success.
	Career development	CERN encourages and supports training in transferable skills for effective career development.
		CERN adheres to the highest standards of health, safety and security.
		CERN consistently strives to deliver environmentally responsible research, both through how it operates and through the results it produces.
Potential candidates (students,	Joining a prestigious employer	CERN is a unique place to work, a place like nowhere else on earth. Take part!
graduates, professionals)	Being part of a unique and talented workforce	CERN is a hub of expertise in particle physics, engineering and computing. We require skilled professionals in these fields to deliver the science of tomorrow.
	Diversity of career opportunities	CERN is at the heart of an international network. It is a melting pot of collaborations and partnerships. Every kind of thinking is welcome and needed.
	Career advancement	CERN needs more than just physicists and engineers. Whatever your field of expertise, whatever stage you are at in your career, CERN could be your next
		opportunity.
		A job at CERN is an excellent stepping stone to a successful career in a range of fields.
		CERN combines attractive working and training conditions with excellent remuneration and benefits, as well as the freedom to work flexibly.
		CERN is a key actor in delivering transparent and responsible research.
		People working at CERN enjoy living a truly cosmopolitan life in the heart of Europe.
CERN alumni	Desire to "give something back"	By keeping in touch with CERN, you remain a part of the CERN story (its successes and growth).
	Wanting to keep in touch	You are a valuable ambassador for CERN and can contribute to increasing our impact on society.
	Networking	We are part of a bustling, dynamic, international and diverse community, united by shared values.
	Career development	
	Mentoring	

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Lifelong learning

Audience	Drivers	Messages
Industry	Innovation	CERN is a large, multidisciplinary organisation that requires a wide range of goods and services.
	Knowledge transfer	Half of CERN's annual budget returns to industry through procurement.
	Recruitment	Contracts with CERN help industry to drive its innovation.
	Job creation	CERN develops cutting-edge technologies related to accelerators, detectors and computing, including diverse technology domains (e.g. superconductivity,
	Return on investment	microelectronics, cryogenics, big data, ultra-high vacuum).
	Collaboration	CERN technologies have applications in many fields beyond high-energy physics that could benefit your area of industry (e.g. medicine, energy, aerospace,
		safety).
		CERN inspires and trains the future workforce.
		The unique know-how and expertise of CERN's scientists and engineers is the key to effectively bridging the gap between fundamental research and its appli-
		cations.
		CERN is an ideal showcase for knowledge transfer: it gave us the World Wide Web and has been a pioneer in other technologies, such as touchscreens and
		PET scanners
Donors	Corporate social responsibility	CERN is a global and highly respected brand.
	Philanthropy	Giving to CERN makes you a partner in spreading CERN's spirit of scientific curiosity.
	Positive publicity	By giving to CERN, you can contribute to enabling more talented young people to take up science, engineering and computing careers.
	Impact	The work carried out at CERN has a significant and positive impact on society, and by giving to CERN you help to reinforce this impact.

### **PARTNERS**

When developing activities and projects, CERN will work closely with a range of internal and external partners to ensure the coherent coordination of communication channels and activities in line with this CERN Communications Strategy and with the communications strategies of our partners.

#### Partners within CERN:

- CERN Council
- · Collaborations of the experiments based at CERN
- CERN departments
- IdeaSquare and Openlab
- CERN & Society Foundation
- Foundation for the Globe of Science and Innovation

#### Partners in the Member States and Associate Member States:

- National laboratories and institutes
- Universities
- Funding bodies
- Business incubation centres

#### Partners in the Host States:

- National, federal and local authorities
- Permanent missions
- "International Geneva"

#### Partners in Europe:

- European Commission
- EIROforum

#### Partners in the particle physics community:

- European Particle Physics Communication Network (EPPCN)
- InterActions collaboration
- International Particle Physics Outreach Group (IPPOG)
- European Physical Society (EPS)
- National physics societies

## CHANNELS AND ACTIVITIES

Communications at CERN can be divided into a range of activities that pass through one or more channels to the target audience(s). All activities aim to be aligned with the goals, objectives and messages set out in this strategy. Thus, when developing activities, the aim will be to create stories and content that will "materialise" the Communications Strategy across tailored channels (e.g. websites, publications, exhibitions, visits).

The table below concerns the channels and activities for which the ECO group is responsible. It is not an exhaustive list, and does not include communications activities carried out by other CERN departments or groups or by the collaborations, although these are often linked to ECO-led activities and/or rely on core CERN communications channels (e.g. CERN's website and social media accounts or video and photography).

Channel	Activities	Target audience(s)
Digital portfolio (online)	CERN websites: home.cern, press.cern and those of other CERN sectors, departments, groups,	All
	units and sections	
	Social media: Facebook, Twitter, Instagram, YouTube, LinkedIn	
Visits to CERN	Visits to CERN On-site visits (including schools)	All
	Guided virtual tours	
	CERN Virtual Reality**	
	Special guest visits	
	Passport to the Big Bang	
	CERN shop	
Exhibitions	Permanent exhibitions (Universe of Particles and Microcosm)	All
	Travelling exhibitions (Accelerating Science, the interactive LHC tunnel, CERN in Images)	
	Visit points: eight existing (SM18, Data Centre, CCC, SC, AMS, CLIC, AVC, ATLAS) and three in	
	preparation (LEIR, AD/ELENA, ALICE)**	
	Online resources for exhibitions	
Public events	Researchers' Night	All (with special
	TEDxCERN	focus on local
	CERN outreach event in 2017**	community)
	CERN open days in 2019	
	Public and private events at the Globe	
Audio-visual:	CDS with content curation	All
photography,	Photography	
video and animations	Stock footage, edited videos	
	360□ photos and videos	
	Co-productions	
	Live broadcasts	
	2D and 3D animations and illustrations	

Channel	Activities	Target audience(s)
Residencies	Within the Arts@CERN programme: Collide, Accelerate and guest artists	All
Visual identity and print	Logos Branding for CERN departments, projects, etc. Corporate material (business cards, e-mail signatures, etc.) Presentation about CERN for VIP visits Annual Report Brochures Christmas card Posters	All
Media relations	PPress Office website  Media management system (clippings, media database)  On-site visits for journalists  Backgrounders/media packs  Media training	Media outlets  CERN scientists
		and staff, including  Management
CERN Courier	Website (to be restructured in 2017)  Digital PDF magazine  Printed magazine	International particle physics community
Internal communications	"CERN Community" webpages  Bulletin for the CERN community sent by e-mail  Printed Bulletin  Screens and electronic text displays  E-mails to members of personnel	CERN community
Teacher programmes	International high-school teacher (HST) programme  National teacher programmes  International teacher weeks (ITW)**  Development of teaching resources and modules  Physics education research	Teachers
Student programmes	S'Cool LAB S'Cool LAB Summer Camp**  Beamline for Schools  High-school students internship programme (HSSIP)**  Participation in international particle physics masterclasses  Development of teaching resources and modules  Physics education research	High school students

<sup>1</sup>In 2017, an ambitious programme to improve the user experience across CERN's websites is being carried out, including: creating a new website for the Organization (in Drupal 8); creating a design language and processes for use in all CERN websites; creating a personal online experience for CERN people; and exploiting opportunities under the dotCERN top-level domain.

<sup>\*\*</sup> New for 2017/from 2017 onwards



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