The ATLAS Public Web Pages

Online Management of HEP External Communication Content

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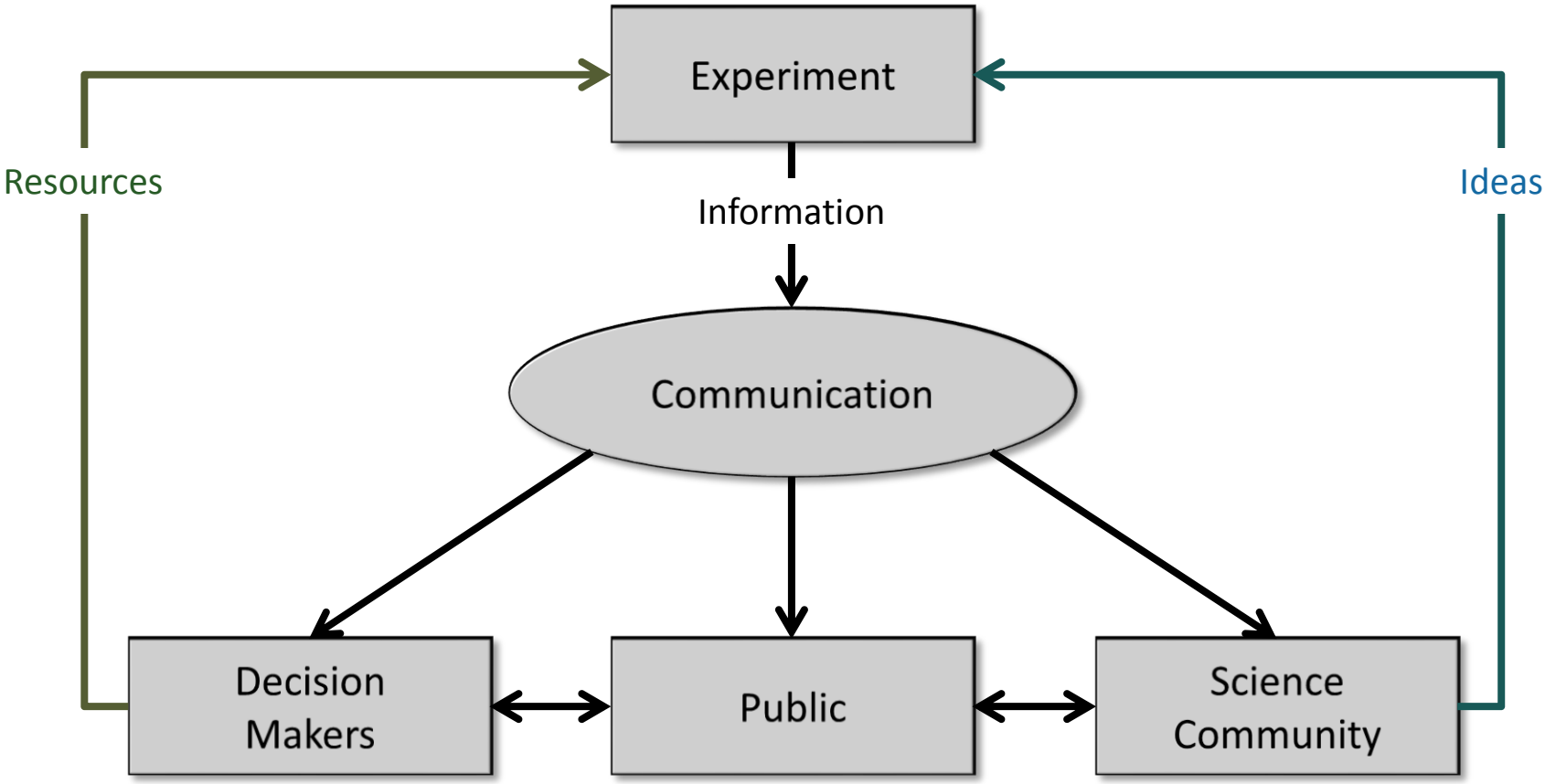
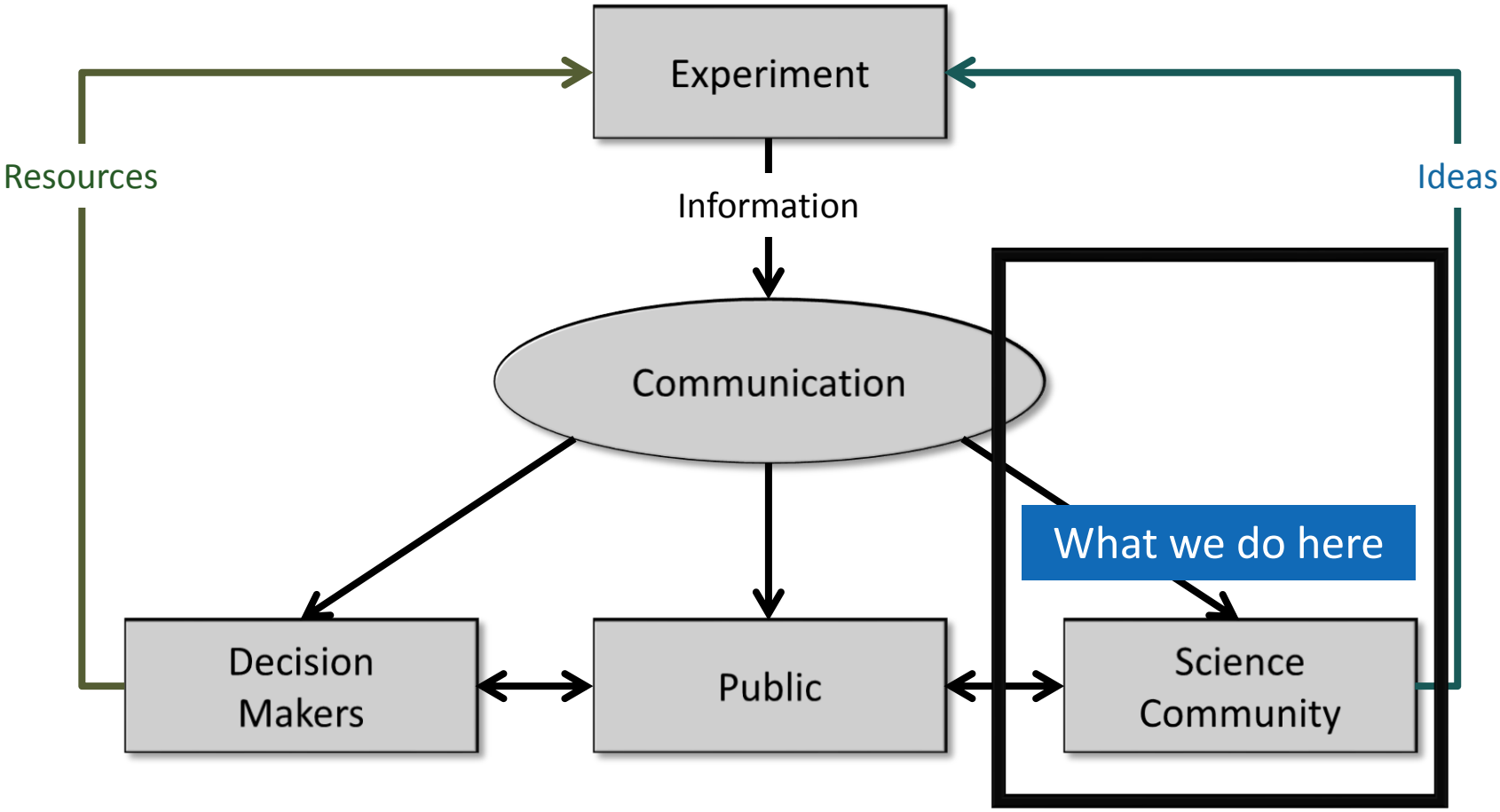
On behalf of the ATLAS Experiment at CERN

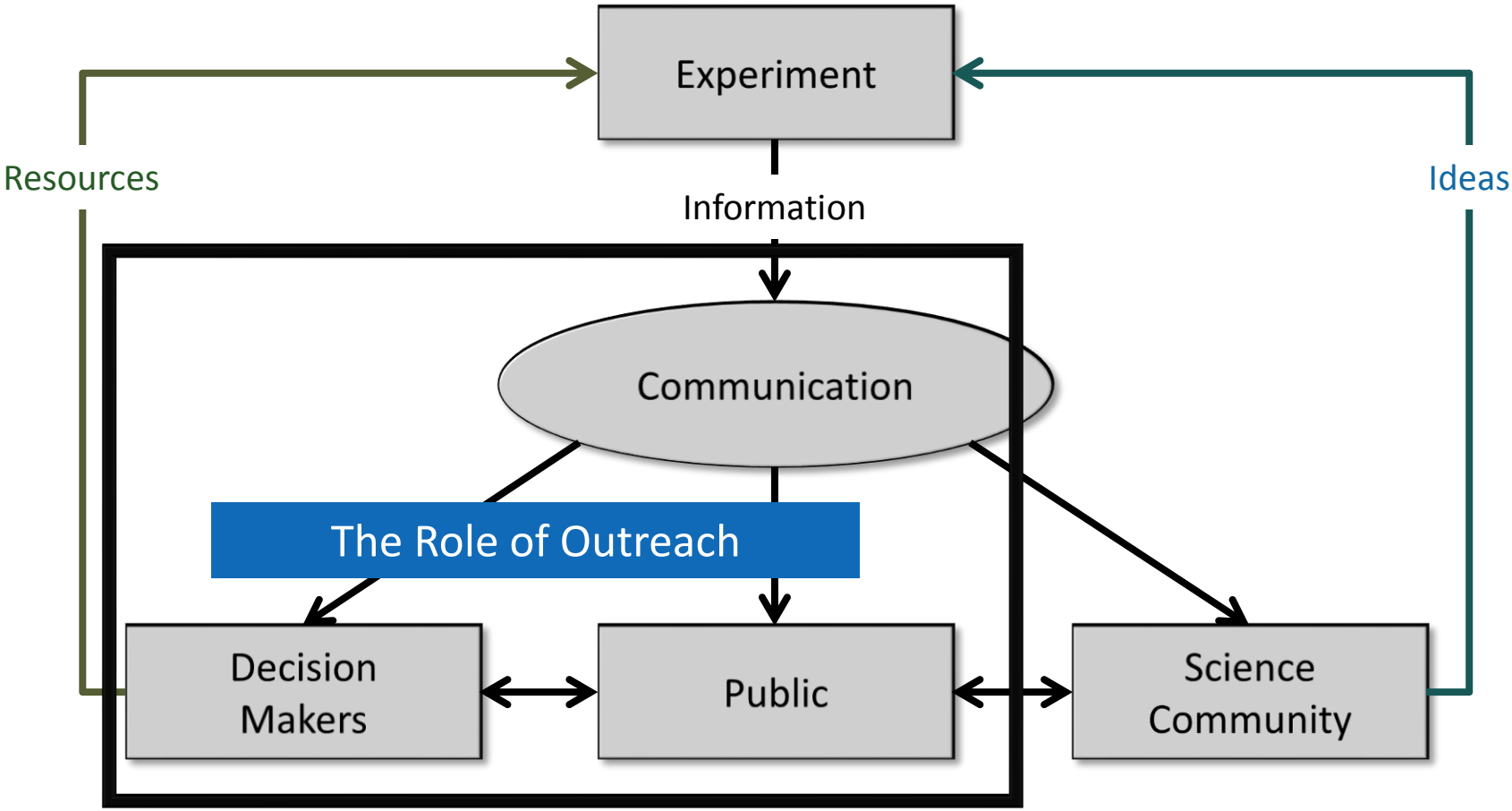
Communication in HEP



Communication in HEP



Communication in HEP



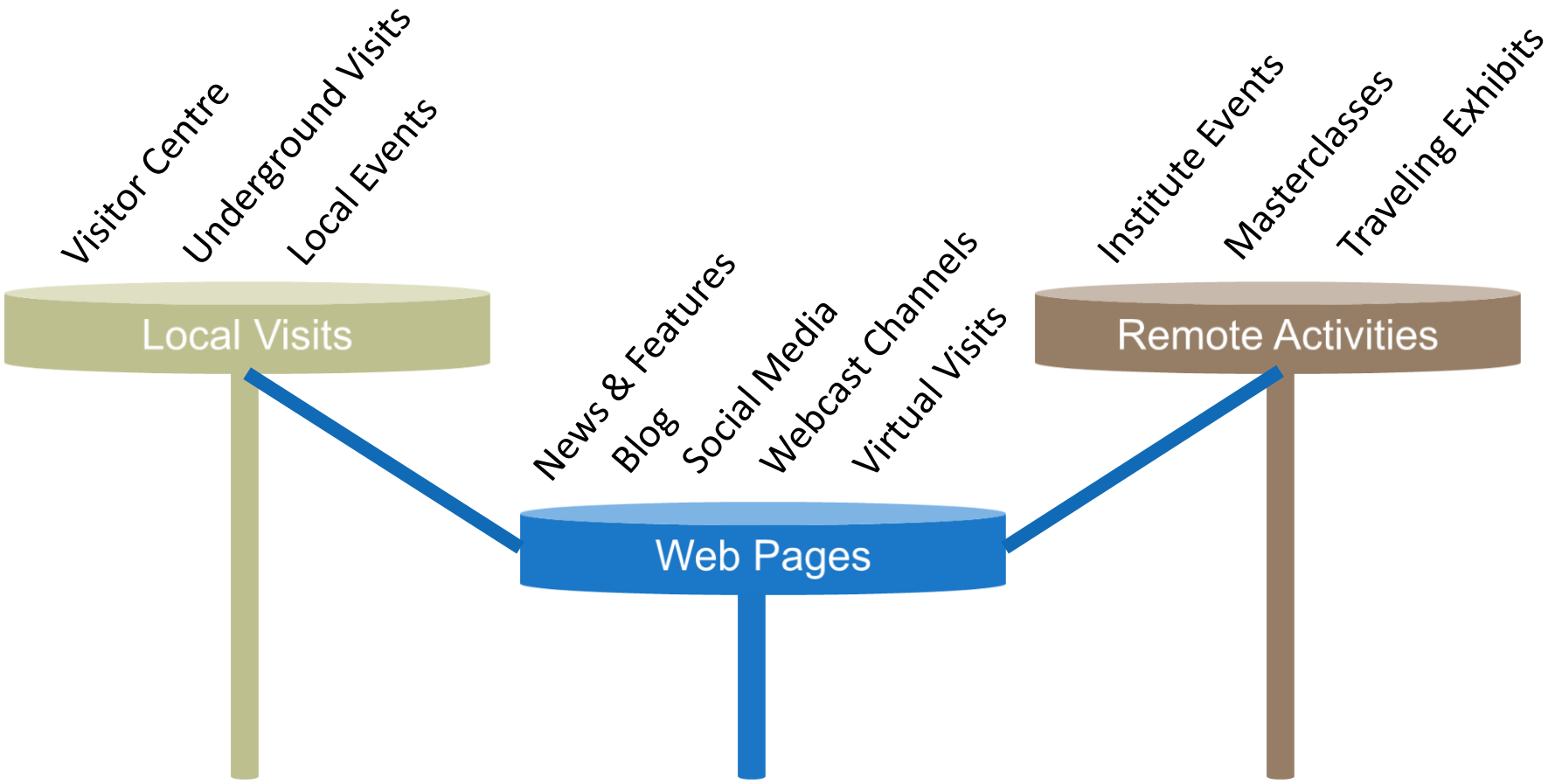
Goals & Audiences

1. Public appreciation of the scientific goals and achievements of ATLAS and the field of particle physics

2. Sustained support for ATLAS, the LHC and particle physics research

3. Attract and retain the next generation of scientists and science educators

Outreach Platforms



Current ATLAS Public Web Pages

Motivation for Change

- Design
  - Navigation
  - Search
  - Visual Identity
- Technology
  - Content Workflow
  - Multimedia Handling
  - Integration with Social Media
- Development & Maintenance
  - Support worldwide contributions from collaboration
  - CERN Support of Drupal Infrastructure
    - ENTICE Recommendations

A Content Management System would more easily support distributed contribution to content development and maintenance.

Development Procedure

- Discovery & Design
  - Analytics
  - Audience Research
  - Stakeholder Interviews
  - Structure
    - Theme, Messages
  - Design Sprints
    - Low-Definition Prototypes

- Implementation
  - Refinement of Prototypes
    - html
  - Finalisation of Design
  - Drupal Templates
  - Content Management Architecture
  - Population of Content
  - Iterations

Analytics (Google)

- Key Numbers from 2013
  - Average Visits
    - Average page views / month: 95,000
    - Average visits / day: 1,500
    - Average visit duration: 1m 40s
    - Bounce Rate: 73% (50% considered not good, 70% disaster)
  - What do they visit?
    - Home 44%, Photos 15%, News 14%, Rest under 3% each

Audience Research

Location

1. Switzerland: 28%
2. United States: 14%
3. Germany: 6.7%
4. United Kingdom: 6.4%
5. France: 4%
6. Italy: 4%
7. Canada: 3%
8. Japan: 3%
9. India: 2%
10. Spain: 1%

Browser

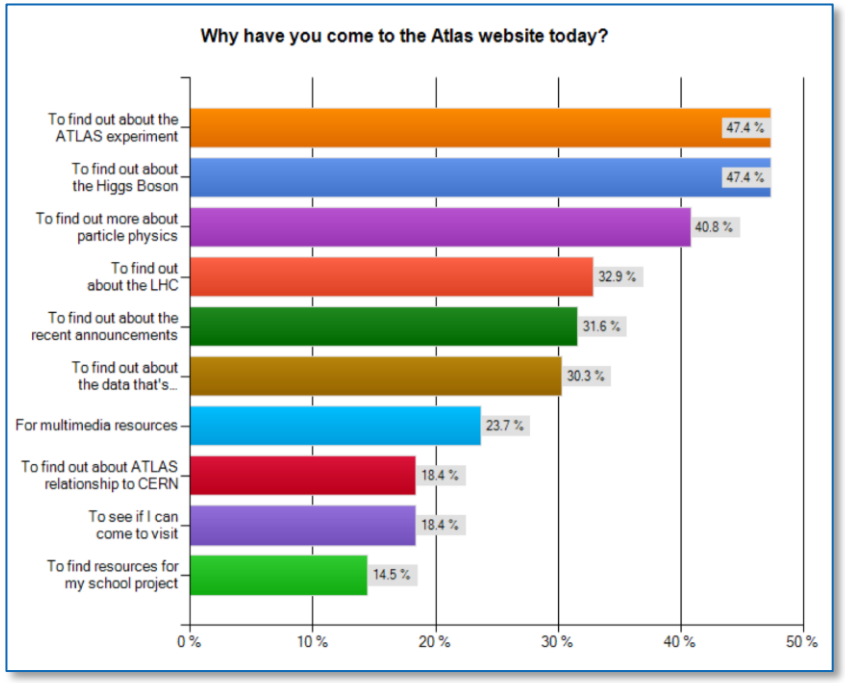
1. Safari: 70k users
2. Chrome: 45k users
3. Firefox: 42k users
4. IE: 25k users

All pages ranked

1. / 179k
2. /news/2012/atlas-and-the-higgs.html 9k
3. /what-is-atlas.html (eTours) 9k
4. /photos/plots.html (eTours) 7k
5. /news/latest-from-higgs-search.html 6k
6. /detector.html 5k
7. /news/ 4k
8. /photos/full-detector.html 4k
9. /photos/lhc.html (eTours) 3k
10. /photos/events.html (eTours) 3k

Sources: Direct

1. Landing page: / 69,522
2. Webcams: /webcams 595
3. News (specific Higgs results): 513
4. /origin-mass.html
5. /photos/plots.html

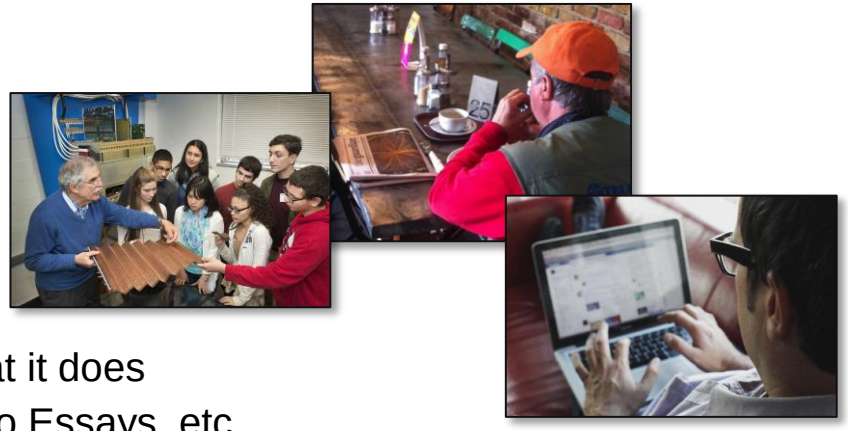


- Key Findings
  - Users are seeking news and updates
    - Increased activity around announcements, events
  - Users are seeking information about ATLAS
    - Supporting resources: images, video, animation, etc.

Stakeholder Interviews

- Expected Public Audience Types
  - Students & Educators / Institutions
  - Scientists
  - General Public
  - Others: Diplomats, VIP, “Scientifically Interested” Public
  - **But Don’t Forget**: Internal Audience from ATLAS, et al.
    - Primarily as messengers
- Identity
  - Clarify difference between CERN / LHC / ATLAS
    - But don’t be afraid to identify with CERN
- Common Suggestion
  - Improvements needed for navigation, access to content

Summary from Discovery Phase



- Primary Audience Targets
  - Students & Educators
  - General Public
  - Scientists & Engineers
- Recommendations for Content
  - Information on what ATLAS is and what it does
  - Updates: News, Blogs, Briefings, Photo Essays, etc.
  - Media-Rich Content (images, video, animations)
  - Integration with Social Media to draw audience
- Performance Enhancement
  - Well-defined workflow
  - Mobile-based browsing (any sized screen)
  - Multilingual
  - Search

Guiding Principles

- Define Workflow in Structure
  - Write → Edit → Approve → Publish (or Iterate)
- Use Existing Databases
  - CDS for ATLAS Material, IPPOG DB for Outreach Material
- Follow Content Guidelines
  - Word Counts for Article Types, Graphic Charter for Look & Feel
  - Re-Usage of Material Across Platforms
    - Web Pages, Social Media, Brochures, Posters, AVC, etc.
- Reduce Maintenance
  - Comply with CERN Guidelines for Modules, Development

Visual Identity

Open Source Fonts:

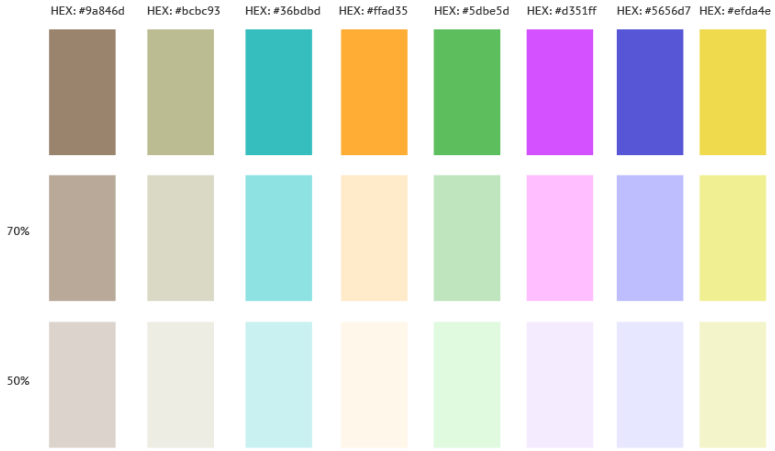
Open Sans for titles, short text
PT Serif for long text

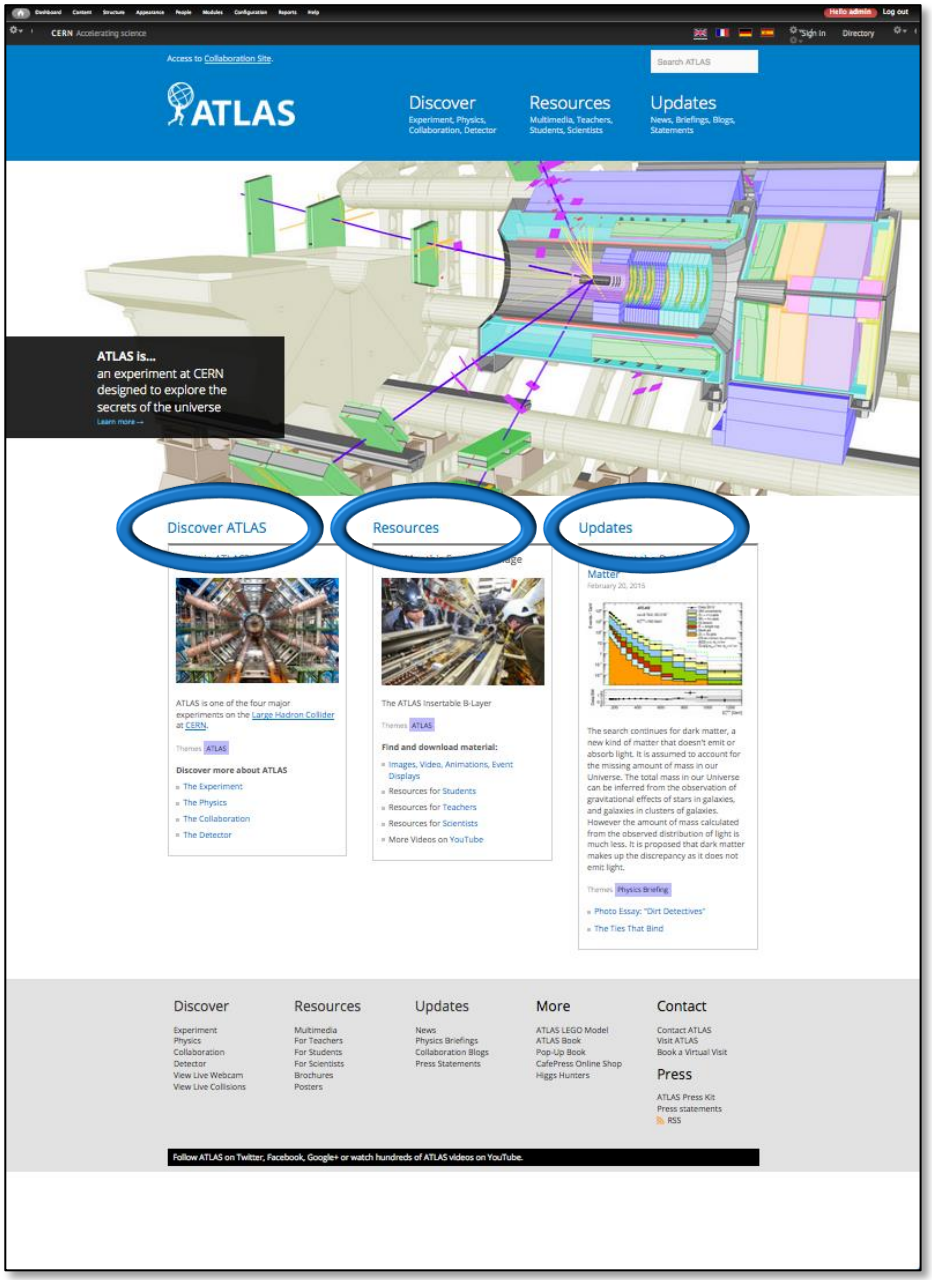
Standard Logo:

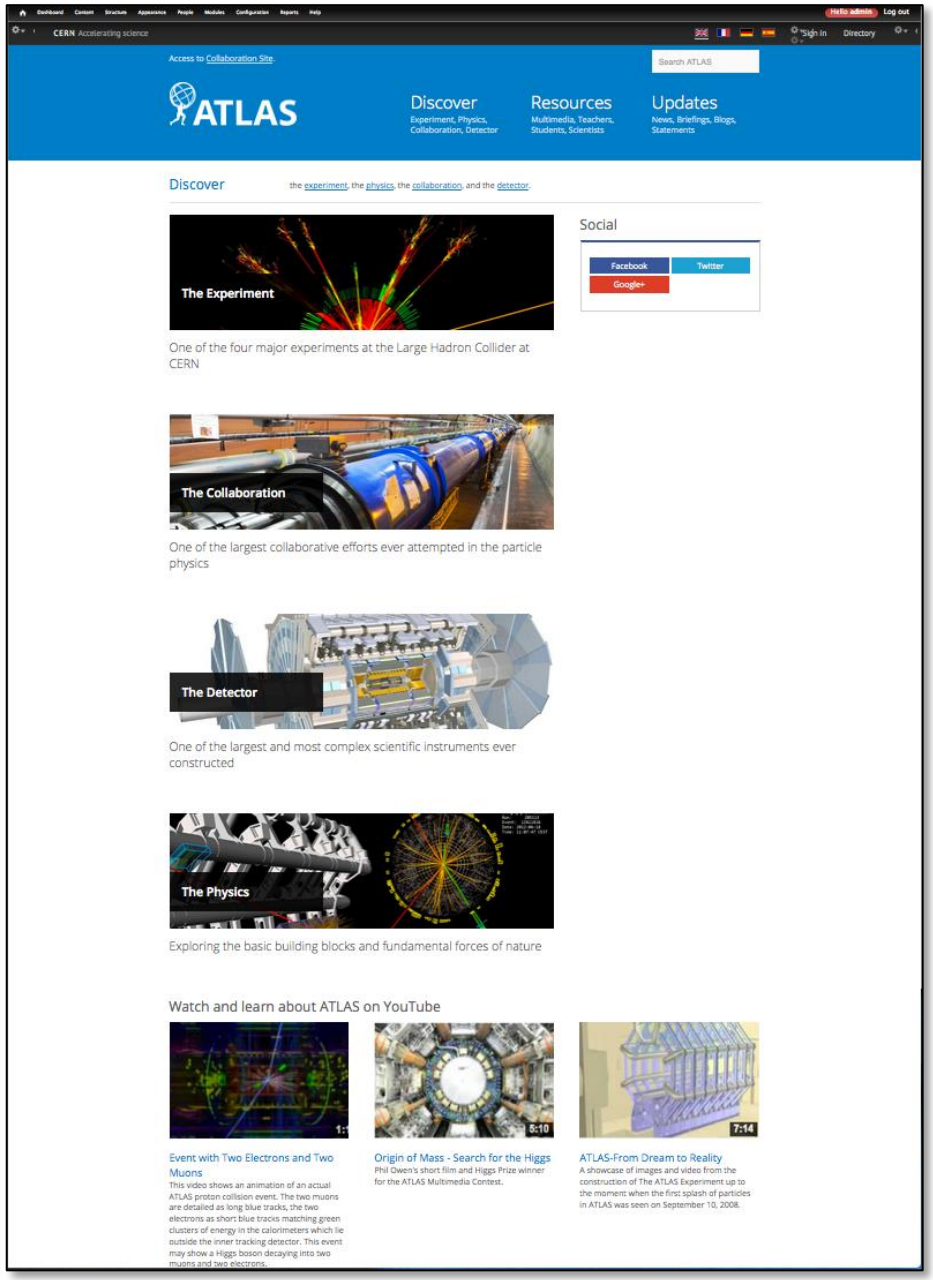
Social Media Logo:

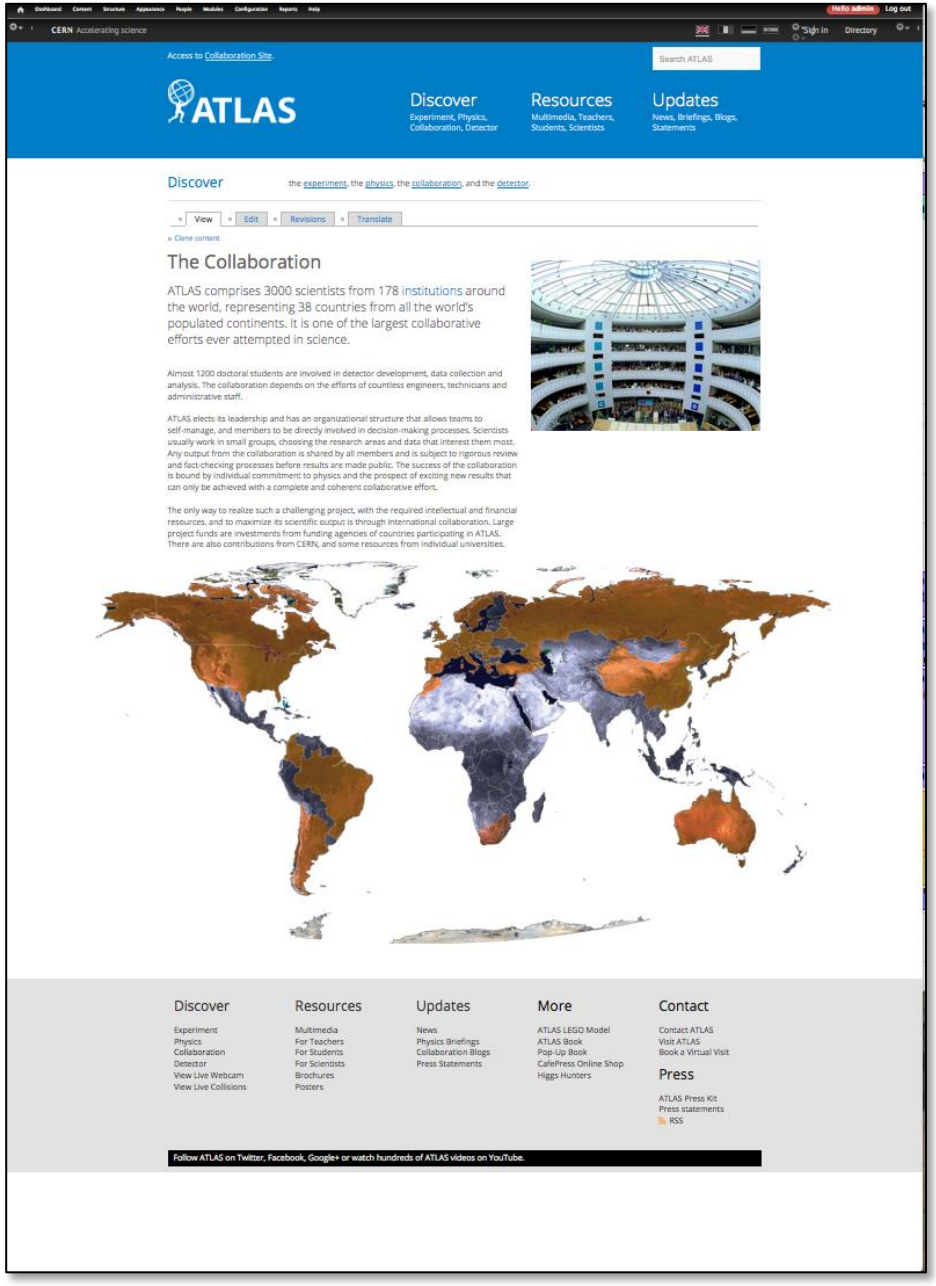
Primary colours

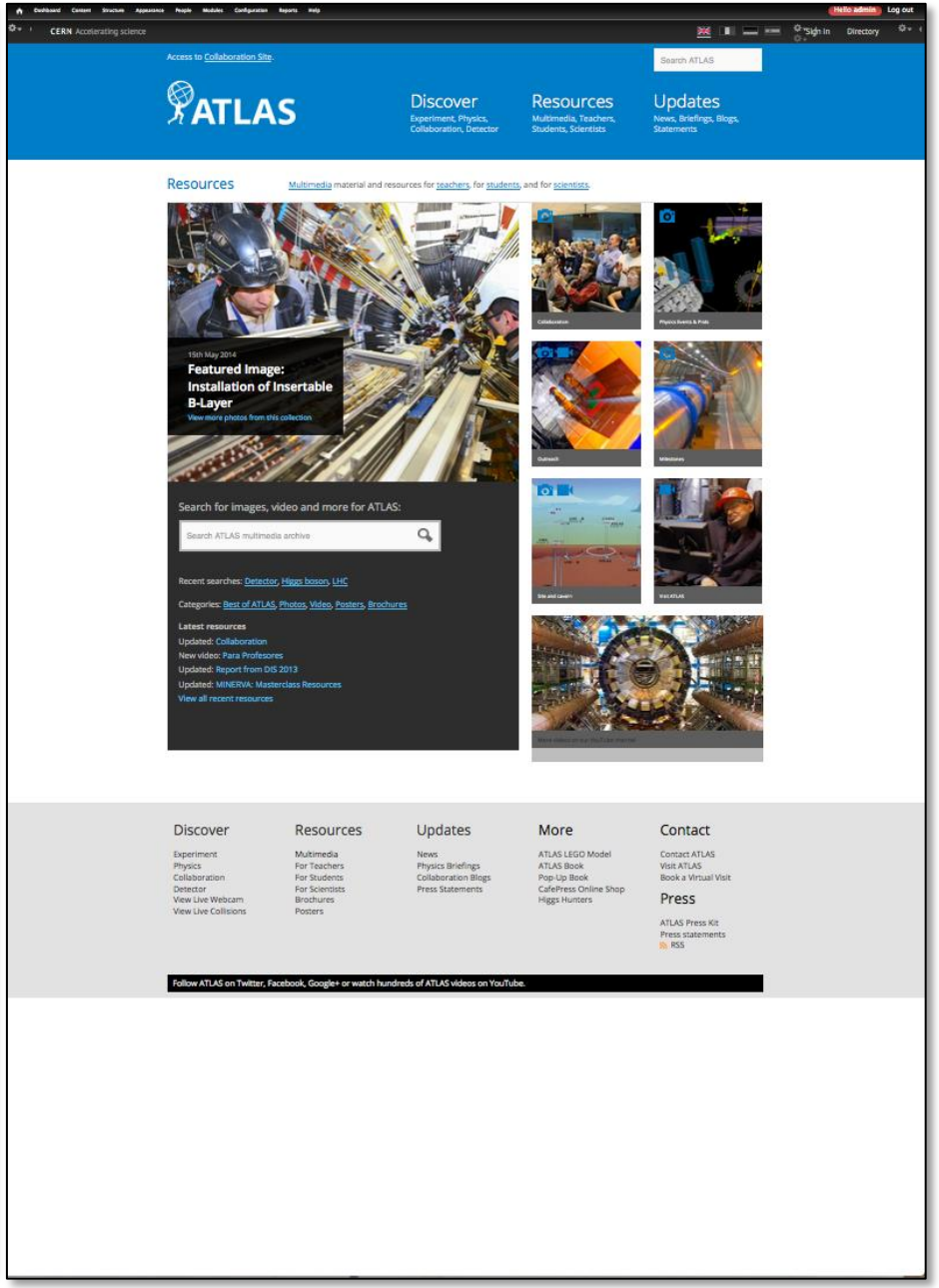
Supporting colours




ATLAS
Discover
Experiment, Physics, Collaboration, Detector
Resources
Multimedia, Teachers, Students, Scientists
Updates
News, Briefings, Blogs, Statements
ATLAS is...
an experiment at CERN designed to explore the secrets of the universe
Discover ATLAS
Resources
Updates
Discover
Resources
Updates
More
Contact
Press
Follow ATLAS on Twitter, Facebook, Google+ or watch hundreds of ATLAS videos on YouTube.


ATLAS
Discover
Resources
Updates
Discover
Social
Facebook
Twitter
Google+
The Experiment
One of the four major experiments at the Large Hadron Collider at CERN
The Collaboration
One of the largest collaborative efforts ever attempted in the particle physics
The Detector
One of the largest and most complex scientific instruments ever constructed
The Physics
Exploring the basic building blocks and fundamental forces of nature
Watch and learn about ATLAS on YouTube
Event with Two Electrons and Two Muons
Origin of Mass - Search for the Higgs
ATLAS-From Dream to Reality


CERN Accelerating science
Access to Collaboration Site.
ATLAS
Discover
Experiment, Physics, Collaboration, Detector
Resources
Multimedia, Teachers, Students, Scientists
Updates
News, Briefings, Blogs, Statements
Discover
the experiment, the physics, the collaboration, and the detector.
The Collaboration
ATLAS comprises 3000 scientists from 178 institutions around the world, representing 38 countries from all the world's populated continents. It is one of the largest collaborative efforts ever attempted in science.
Follow ATLAS on Twitter, Facebook, Google+ or watch hundreds of ATLAS videos on YouTube.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News, Briefings, Blogs, Statements
Resources
Multimedia material and resources for teachers, for students, and for scientists.
Featured Image: Installation of Insertable B-Layer
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Follow ATLAS on Twitter, Facebook, Google+ or watch hundreds of ATLAS videos on YouTube.

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Access to Collaboration Site.

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Resources
Multimedia, Teachers, Students, Scientists

Updates
News, Briefings, Blogs, Statements

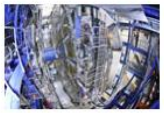
Search ATLAS

Updates

Latest News, Physics Briefings, Collaboration Blogs, and Press Statements from ATLAS.

ATLAS News

Handing In the ATLAS Keys

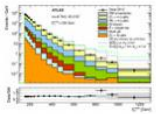


After completing more than 250 work packages concerning the whole detector and experimental site, the ATLAS and CERN teams involved with Long Shutdown 1 (LS1) operations are now wrapping things up before starting the commissioning phase in preparation for the Large Hadron Collider's restart.

Read more →

Physics Briefing

Looking at the Dark side of Matter



The search continues for dark matter, a new kind of matter that doesn't emit or absorb light. It is assumed to account for the missing amount of mass in our Universe. The total mass in our Universe can be inferred from the observation of gravitational effects of stars in galaxies, and galaxies in clusters of galaxies. However the amount of mass calculated from the observed distribution of light is much less. It is proposed that dark matter makes up the discrepancy as it does not emit light.

Read more →

ATLAS News

Photo Essay: "Dirt Detectives"

For five days last week, 110 ATLAS collaborators worked in 10 different shifts to help clean and inspect the detector and the cavern that houses it before the toroid magnets are turned on. The whole endeavour is a delicate process as the collaborators wiped and vacuumed surfaces in all 16 phi sectors of the detector looking for any minuscule object that may have been left behind during the two years of upgrade and maintenance work. Here are glimpses from the cleaning project.

Read more →

ATLAS Blog

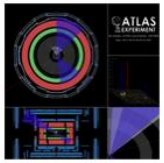
The Ties That Bind

A few weeks ago, I found myself in one of the most beautiful places on earth: wedged between a metallic cable tray and a row of dusty cooling pipes at the bottom of Sector 13 of the ATLAS Detector at CERN.

Read more →

Physics Briefing

In search of super charm



If all the experimental evidence supports a theory, why should anyone want to dream up additional particles? Yet exactly this situation arose in the late 1960s. At that time, when the complete table of the known hadrons could be explained with just three quarks, theorists were already proposing a fourth, which they whimsically called "charm".

Read more →

1 2 3 4 5 6 next › last »

More from ATLAS →

Crowds at ATLAS for CERN Open Days
Englert and Higgs get the Nobel
Lorem Ipsum is simply dummy text of the printing and typesetting industry.

ATLAS in the news

- Handing In the ATLAS Keys
- Photo Essay: "Dirt Detectives"
- What We Learned from ATLAS at Les Rencontres de Moriond 2013
- ATLAS in the Italian Alps for the Rencontres de Moriond 2013
- Report from DIS 2013

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The Ties That Bind

15th January 2015

A few weeks ago, I found myself in one of the most beautiful places on earth: wedged between a metallic cable tray and a row of dusty cooling pipes at the bottom of Sector 13 of the ATLAS Detector at CERN. My wrists were scratched from hard plastic cable ties, I had an industrial vacuum strapped to my back, and my only light came from a battery powered LED fastened to the front of my helmet. It was beautiful.

Beneath the ATLAS detector – note the well-placed cable ties. IMAGE: Claudia Marcelloni, ATLAS Experiment © 2014 CERN.

The ATLAS Detector is one of the largest, most complex scientific instruments ever constructed. It is 46 meters long, 26 meters high, and sits 80 metres underground, completely surrounding one of four points on the Large Hadron Collider (LHC), where proton beams are brought together to collide at high energies. It is designed to capture remnants of the collisions, which appear in the form of particle tracks and energy deposits in its active components. Information from these remnants allows us to reconstruct properties of the collisions and, in doing so, to improve our understanding of the basic building blocks and forces of nature.

On that particular day, a few dozen of my colleagues and I were weaving our way through the detector, removing dirt and stray objects that had accumulated during the previous two years. The LHC had been shut down during that time, in order to upgrade the accelerator and prepare its detectors for proton collisions at higher energy. ATLAS is constructed around a set of very large, powerful magnets, designed to curve charged particles coming from the collisions, allowing us to precisely measure their momenta. Any metallic objects left in the detector risk turning into fast-moving projectiles when the magnets are powered up, so it was important for us to do a good job.

ATLAS is divided into 16 phi sectors with #13 at the bottom. IMAGE: Steven Goldfarb, ATLAS Experiment © 2014 CERN

The significance of the task, however, did not prevent my eyes from taking in the wonder of the beauty around me. ATLAS is shaped somewhat like a large barrel. For reference in construction, software, and physics analysis, we divide the angle around the beam axis, phi, into 16 sectors. Sector 13 is the lucky sector at the very bottom of the detector, which is where I found myself that morning. And I was right at ground zero, directly under the point of collision.

The real beauty lies not in the parts themselves, but rather in the magnificent stories of international cooperation and collaboration that they tell.

To get to that spot, I had to pass through a myriad of detector hardware, electronics, cables, and cooling pipes. One of the most striking aspects of the scenery is the ironic juxtaposition of construction-grade machinery, including built-in ladders and scaffolding, with delicate, highly sensitive detector components, some of which make positional measurements to micron (thousandth of a millimetre) precision. All of this is held in place by kilometres of cable trays, fixings, and what appear to be millions of plastic (sometimes sharp) cable ties.

Scaffolding and ladder mounted next to the precision muon spectrometer. IMAGE: Steven Goldfarb, ATLAS Experiment © 2014 CERN.

The real beauty lies not in the parts themselves, but rather in the magnificent stories of international cooperation and collaboration that they tell. The cable tie that scratched my wrist secures a cable that was installed by an Iranian student from a Canadian university. Its purpose is to carry data from electronics designed in Germany, attached to a detector built in the USA and installed by a Russian technician. On the other end, a Japanese readout system brings the data to a trigger designed in Australia, following the plans of a Moroccan scientist. The filtered data is processed by software written in Sweden following the plans of a French physicist at a Dutch laboratory, and then distributed by grid middleware designed by a Brazilian student at CERN. This allows the data to be analyzed by a Chinese physicist in Argentina working in a group chaired by an Israeli researcher and overseen by a British coordinator. And what about the cable tie? No idea, but that doesn't take away from its beauty.

There are 178 institutions from 38 different countries participating in the ATLAS Experiment, which is only the beginning. When one considers the international make-up of each of the institutions, it would be safe to claim that well over 100 countries from all corners of the globe are represented in the collaboration. While this rich diversity is a wonderful story, the real beauty lies in the commonality.

All of the scientists, with their diverse social, cultural and linguistic backgrounds, share a common goal: a commitment to the success of the experiment. The plastic cable tie might scratch, but it is tight and well placed; its cable is held correctly and the data are delivered, as expected. This enormous, complex enterprise works because the researchers who built it are driven by the essential nature of the mission: to improve our understanding of the world we live in. We share a common dedication to the future, we know it depends on research like this, and we are thrilled to be a part it.

ATLAS Collaboration members in discussion. What discoveries are in store this year? IMAGE: Claudia Marcelloni, ATLAS Experiment © 2008 CERN.

This spring, the LHC will restart at an energy level higher than

Summary

- Lessons Learned
  - Do the research
  - Design is critical (for any public platform)
  - Sprint & iterate
  - Content Management Systems require patience
- Next Steps
  - Simplifying templates (increased flexibility)
  - Completion of upload and porting to CERN, Beta in May
  - Complete port by end of year

With many thanks to CERN IT, CERN DG COM, and the ENTICE Group

Resources

Public Web Sites	
Public Home Page	http://atlas.ch
ATLAS Blog	http://atlas.ch/blog
ATLAS Virtual Visits	http://cern.ch/atlas-virtual-visit
ATLAS Live	http://cern.ch/atlas-live
Twitter Feed	http://www.twitter.com/ATLASexperiment
Facebook Page	http://www.facebook.com/ATLASexperiment
Google+ Page	http://www.google.com/+ATLASexperiment
YouTube	http://www.youtube.com/user/TheATLASExperiment
Web Development Partners	
Mark Boulton Design	http://www.markboultondesign.com
Vector Media Group	http://www.vectormediagroup.com
External Resources	
IPPOG Database	http://ippog.web.cern.ch
CERN CDS	http://cds.cern.ch