Overleaf Use Case: BioLEIR Yellow Report

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BioLEIR Study Context

2016: ATS-wide Study Group, Mandate (F. Bordry) 4/2016

- **Determine a _coherent set of beam parameters_, based on requirements from med community**

- **Perform a feasibility design study with enough detail to:**

    - **List and define all necessary interfaces, _stumbling blocks_, and open questions/issues**

    - **Outline potential _challenges_**

    - **Identify required further R&D**

    - **Arrive at _high-level_ _cost and resource_ estimates**

    - **Establish a _preferred installation scenario_**
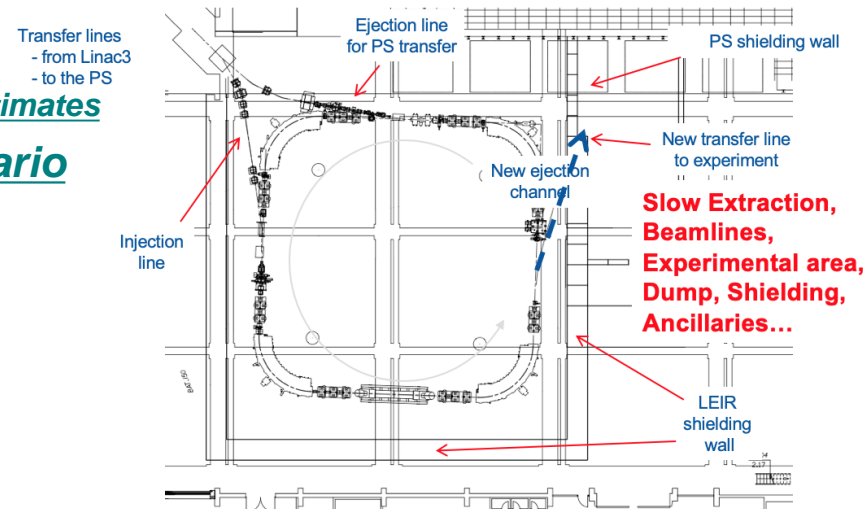
Scope

- **170 pages**
- **Very short timeline: < 1 year**

Context

- **CERN study group concentrating on technical facility aspects**

5 departments, ~20 groups, ~50 people involved
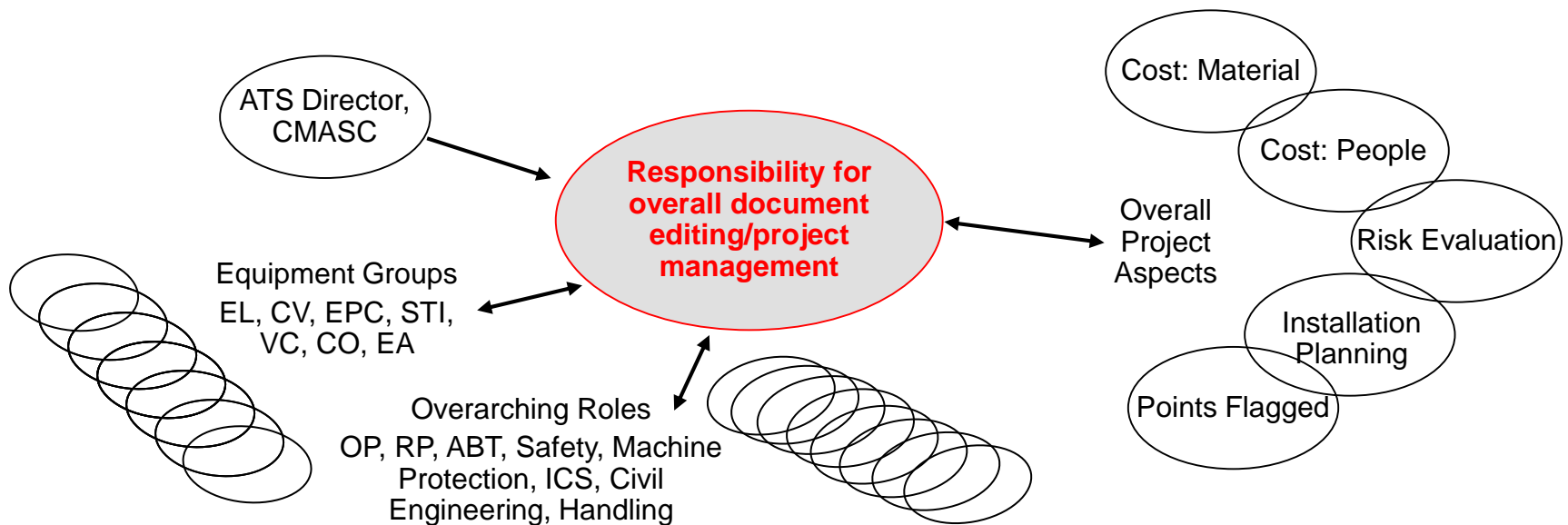**Full yellow report delivered by 3/2017: 10 months**

BioLEIR: Collaborative, parallel Editing

◆ **Need for**

- **Maximum control over layout, choice of LaTeX (instead of Word)**

- **versioning control**

- **collaborative platform** *(to meet a very challenging deadline, parallel work on chapters desired)*

CHOICE for collaborative online editing platform *Overleaf*

BioLEIR: Collaborative, parallel Editing

◆ **Decision for 3 project phases**

- **Phase 1: 5 months of parallel work, independent editing of chapters by corresponding experts**

- **Phase 2: 3 months of pulling the chapters together to arrive at a common document with correct cross-references**

- **Phase 3: freezing of individual chapter contents, 2 months of editing the overall document by the editors – for coherence of level, language and style**

BioLEIR: special document structure for phase 1+2

◆ **Setup of a special project structure specifically for the BioLEIR need**

- ▪ **Common structure with subdirectories and nomenclature for all 18 individual chapters**

- ▪ **From the start, one overall main file would be including each chapter using the *linked-file feature* such that**
  - ◆ **We could compile the current full document with all chapters dynamically**
  - ◆ **While *each chapter* could *compile* individually as a *standalone* document, using a main file that would include only its chapter**

- ▪ **Full editorial access was limited to chapter contributors, read-access to full document given via the above structure such that cross-referencing and control of content coherence was possible for chapter editors**

- ▪ **Updating of linked files could happen whenever a chapter editor would deem the chapter stable enough**

- ▪ **Overleaf provided a *special feature* within the project area that would *allow all linked files to be updated simultaneously* if desired, rather than one-by-one.**

Appendix
Bib
Chapters
Figures
  BeamDynamics
  Beamlines
    Beamlines_layou...
    Beamlines_layou...
    Beamlines_layou...
    Beamlines_layou...
    Beamlines_optic...
  Controls
  Cost
  EA
  Extraction
  FrontendAndLinac
  Infrastructure
  InjectionTransferLin...
  Introduction

Menu ⬆

Appendix
Bib
Figures
Cost.tex
main.tex

Menu ⬆

Source Rich Text

Appendices
Chapters
Figures
FrontBackMaterial
  00_frontmatter.tex
  00_title.tex
  10_backmatter.tex
  cc.pdf
  LogoOutline-Blac...
BioLEIRYR.tex
cernall.sty
cernchemsym.sty
cernmono.cls
cernrep.cls
cernunits.sty
cernyrep.cls
cernyrep2.cls
contributors.tex

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154
155  \pagenumbering{roman}
156  \setcounter{page}{3}
157  \cleardoublepage
158  \pagestyle{fancy}
159  \pagenumbering{arabic}
160  \setcounter{page}{1}
161  \renewcommand{\floatpagefraction}{0.9}
162  \renewcommand*\thesection{\thechapter.\arabic
163
164  \include{Chapters/ExecutiveSummary}
165  \include{Chapters/Introduction}
166  \include{Chapters/BeamRequirements}
167  \include{Chapters/IonSource}
168  \include{Chapters/FrontendAndLinac}
169  \include{Chapters/InjectionTransferLine}
170  \include{Chapters/BeamDynamics}
171  \include{Chapters/Extraction}
172  \include{Chapters/Beamlines}
173  \include{Chapters/EA}
174  \include{Chapters/Vacuum}
175  \include{Chapters/Infrastructure}
176  \include{Chapters/MO}
177  \include{Chapters/Controls}
178  \include{Chapters/RP}
179  \include{Chapters/Safety}
180  \include{Chapters/Planning}
181  \include{Chapters/Cost}
182  \include{Chapters/Risk}
183  \include{Chapters/PointsFlagged}
184
```

Screenshot

BioLEIR: experience from phase 3

◆ **BioLEIR project setup: now a CERN use-case**

- ▪ **Setup Overleaf structure for Physics Beyond Collider-report, provision of tutorial and Overleaf advisor**

◆ **Content coherence: pulling it together**

- ▪ **The way that we had set up the project initially was key in allowing the proper editing of the final document to be done in very little time (10 weeks)**
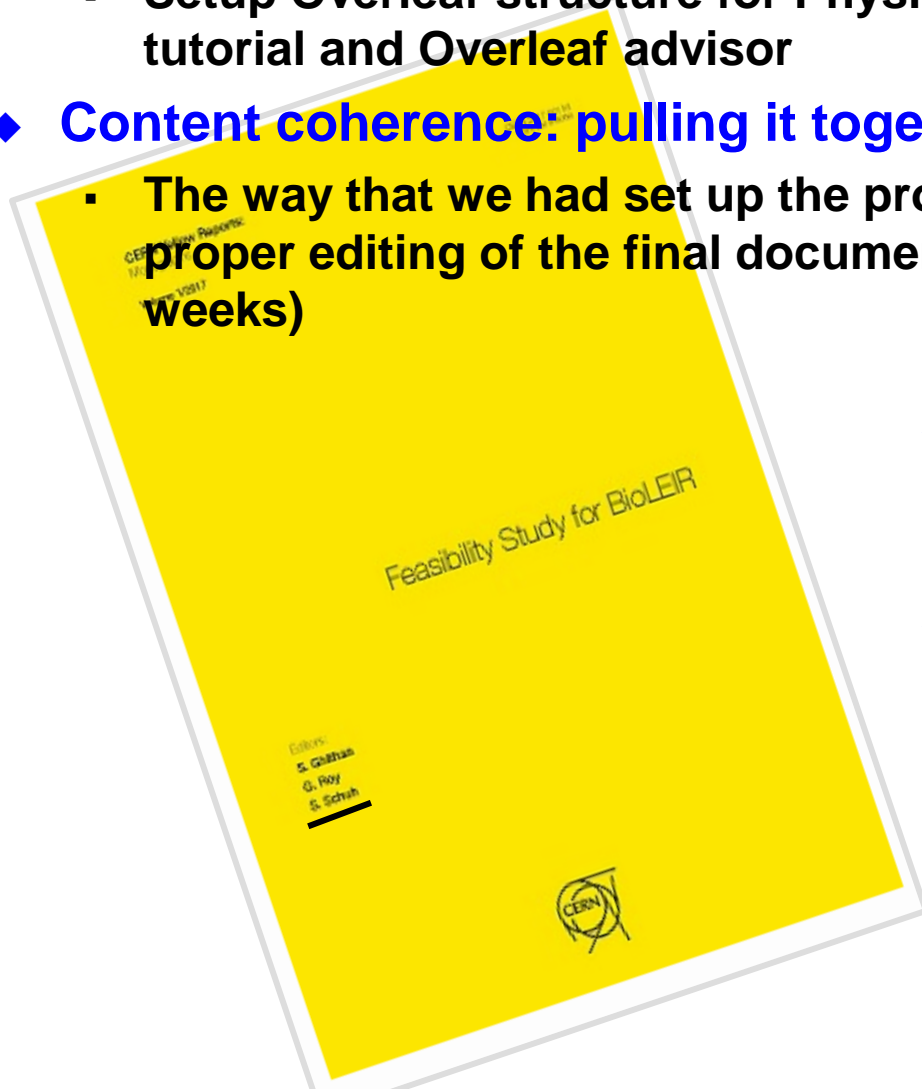
◆ **180 pages with good level and quality of detail**

◆ **delivery of a _very good quality_ CERN yellow report ON TIME**

- ▪ **Small editorial team during 10 weeks (record time?)**

Feasibility Study for BioLEIR

Editors:
S. Gilardoni
G. Roy
S. Schuh

BioLEIR Yellow Report – some feedback from the field

- ◆ **How did we like working with Overleaf?**
  - ▪ **We loved it – and ended up using the tool also for writing simple conference/research papers, as the collaborative editing was made so simple**
  - ▪ **Once we adopted Overleaf as tool, we also received timely and concrete help from Overleaf staff**
    - ◆ **We discussed our specific needs and adoption of the overall structure as a project with linked files was following advice from them**
    - ◆ **A special "update all linked files" button was implemented specifically for us**
    - ◆ **When we had some complex LaTeX issues at the last stage of pulling the project together, the Overleaf LaTeX experts helped extremely quickly and efficiently**

- ◆ **Word-Users adaptability**
  - ▪ **Despite resistance to use LaTeX, importing of Word documents and personal 'hand-holding' efforts resulted in Word-users appreciating the advantages of LaTeX and the ease of collaborative editing**