



BE-CO Activities during the LS2 period

Stephane Deghaye (BE-CO)

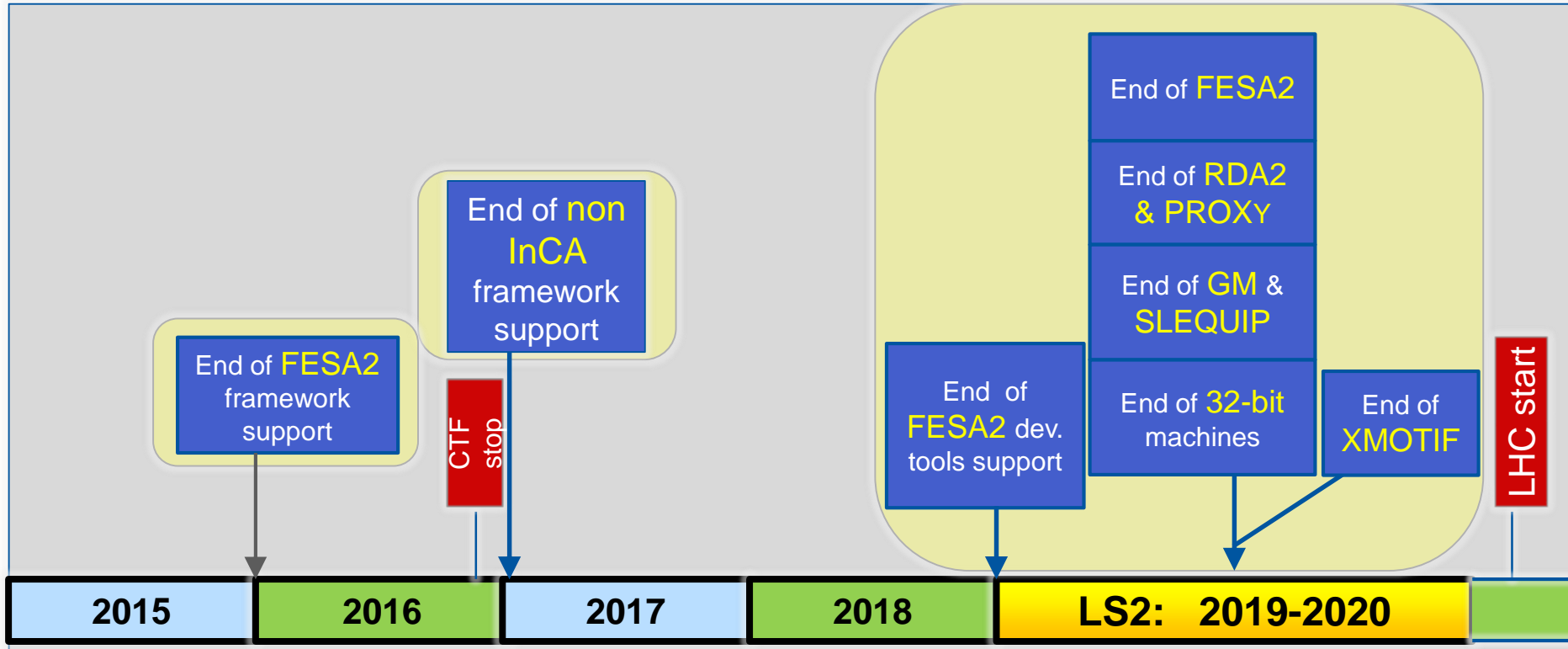
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Post-ACCOR renovations

- Renovation of low-level controls
 - More than **900 front-end computers**
- End-of-Life (EoL) of part of the Controls infrastructure
 - Operating systems (LynxOS, 32-bit Linux)
 - Real-time applications (FESA2, GM, SLEquip)
 - Communication (RDA2)
 - X/Motif applications

BE-CO's EoL roadmap



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LS2
Days

7th & 8th November 2016

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Post-ACCOR renovations - planning

- Eqp groups' renovation roadmap **compliant**
 - Require contributions from all eqp groups (10+)
 - Some items on the critical paths (e.g. b-train) with tight planning
 - Some items have to-be-validated technical solutions (high risk)
 - Followed up & updated every 6 months in CO3
- Non-InCA Java applications stop with CTF end of this year

Plan: 10972, 10973, 10974, 10975, 10976, 10977, 10979

Application & Database consolidation

- Public API changes (CALIS, CCS, JAPC, LSA)
 - New API available at LS2 start or even earlier (early 2018)
 - Old API discarded at the end of LS2
- Layout service – new system & tools
 - Re-focus scope on pure layout data
 - Empower users to manage their own data
 - 1st version available early 2018

Plan: 10981, 10992, 10993, 10994



Application & Database consolidation

- New database servers & storage
 - New hardware for the database services
 - **LS2: installation and switch to new systems**
- Suppression of COPUB public account
 - **Planning: gradual suppression until LS2**
- Suppression of ADECONTROLS database
 - **LS2: Complete deletion of account and tables**

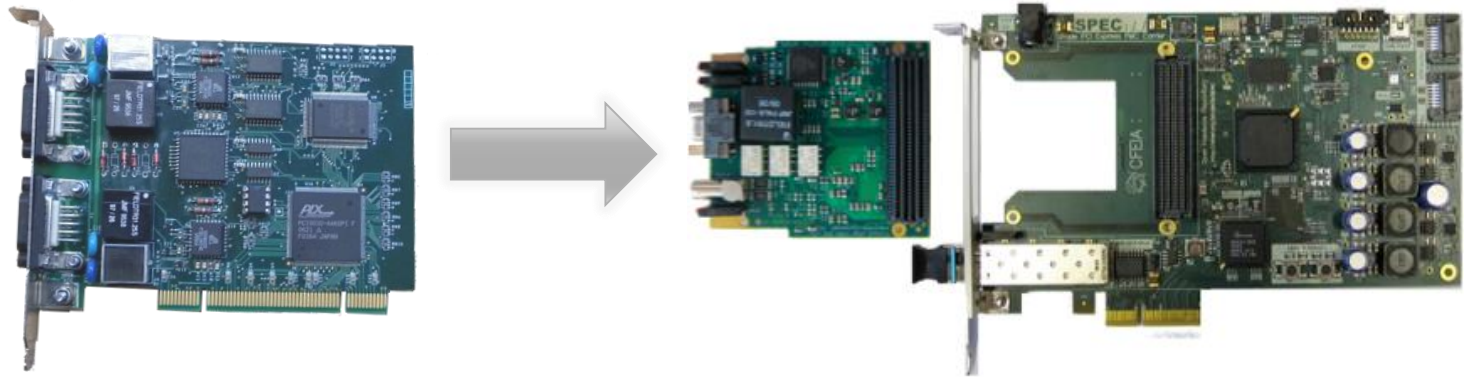
Plan: 10983, 10990, 10991

Hardware consolidation & renovation

- LHC WorldFIP infrastructure renovation
- OASIS consolidation
- Timing renovation
- Other projects

LHC WorldFIP infrastructure

- WorldFIP master renovation
 - Deploy CERN-designed bus arbiters & software stack to replace Alstom's solution.
 - **EYETS: install pilots**
 - **LS2: full replacement**



Plan: 10822

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LHC WorldFIP infrastructure

- WorldFIP Cu/Opt repeater renovation
 - Ageing Alstom repeaters replaced by in-sourced design (GOFIP)
 - **LS2: Complete renovation**



Plan: 10822



LS2
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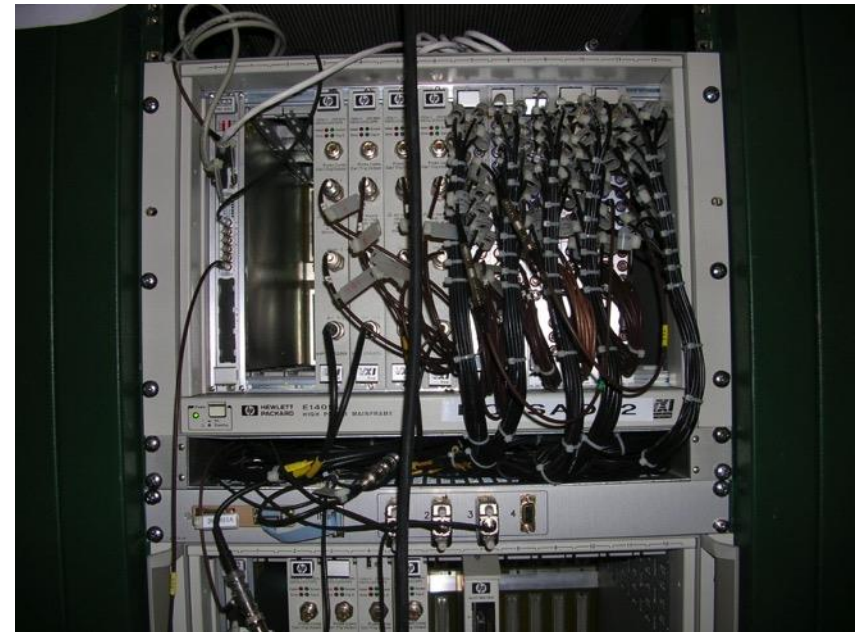
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OASIS consolidation

- Eradication of the VXI platform
 - Replace 20+ y/o VXI digitisers by modern solutions
 - EYETS/YETS: partial eradication
 - LS2: Total eradication



Plan: 10829

OASIS consolidation

- Triggering network based on WhiteRabbit
 - LS2: Complete trigger generation & reception
 - Post-LS2: gradual switch to new infrastructure
 - EN-EL: network topology being finalised

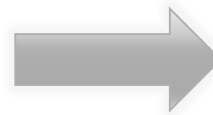
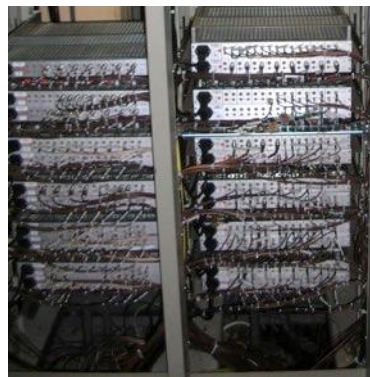


Plan: 10821

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Timing renovation

- Timing pulse distribution renovation
 - Replace 40 y/o pulse repeaters
 - **TS/EYETS/YETS: small installations**
 - **LS2: complete renovation**
 - **IT/CS: Missing resources**

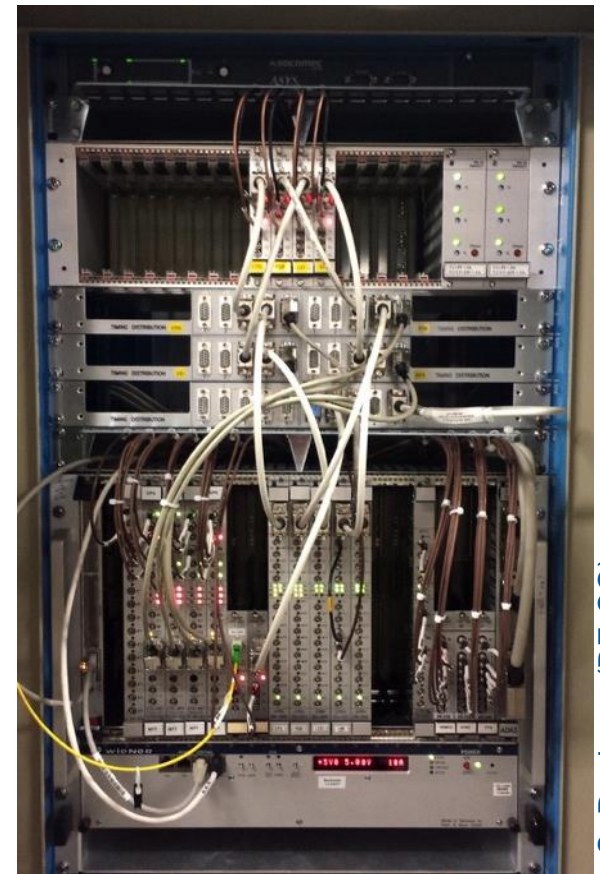


Plan: 10795

Timing renovation

- Central timing network renovation
 - Renovate the central timing network (aka GMT) with White Rabbit
 - YETS: Deploy proof-of-concept
 - LS2: new network deployed
 - Post-LS2: slow migration to new infrastructure

Plan: 10797



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Timing renovation

- Central timing's external condition renovation
 - Renovate unreliable legacy hardware with modern industrial solution
 - Collaboration between BE-CO & BE-ICS
 - **LS2: complete migration**

Plan: ~~40799~~, new activity by ICS



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Other projects

- Decabling project (EN-EL)
 - Identification of obsolete BE-CO cables
 - **EYETS/YETS**
 - PSB: 634 cables to be removed
 - PS: 2228 cables to be processed
 - SPS: 265 cables to be removed (points 3 & 5)

Plan: 10828



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Other projects

- SPS intercom
 - Activity integrated in the **Fire Safety Project** by *BE-ICS-AS*

Plan: 10982



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Other projects

- Replacement of TN routers & switches (IT)
 - Critical activities
 - **Cost: 2 to 4 MCHF to be requested (consolidation)**

Plan: 10042, 10043

Conclusions

- Post-ACCOR roadmaps **compliant** with EoL
 - Followed-up in CO3
- OASIS trigger renovation: **info to EN-EL**
- Timing pulse distribution: **follow-up with IT-CS**
- Some activities to be moved to BE-ICS (timing external conditions, SPS intercom)
- Consolidation **budget to be requested** for IT network equipment

