



SMB Department

LS2 period main activities

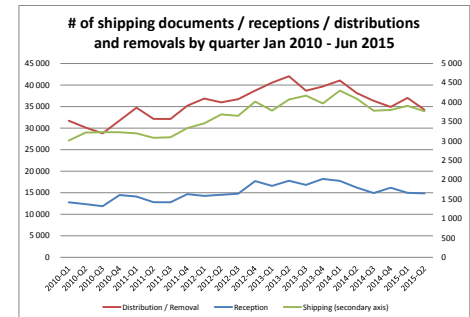
Luigi Scibile (SMB-SE) on behalf of SMB

Outline

- Logistics (SMB-SC)
- Stores (SMB-SC)
- Waste (SMB-SC)
- Cleaning (SMB-SIS)
- Mobility (SMB-SIS)
- Site Security (SMB-DI)
- Medium/Large civil projects (SMB-SE)
- Civil maintenance and works (SMB-SE)

Logistics (SMB-SC)

- « LS bump » for logistics-related services, starting several months ahead of actual LS start
- Additional manpower required (like LS1)
- Extra truck
- **Included in the MTP**



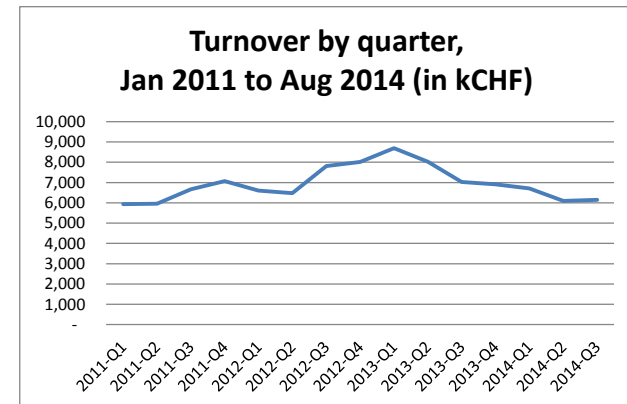
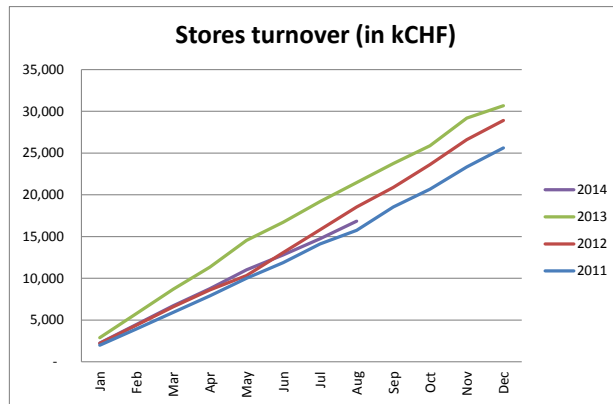
| Budget (kCHF) | 2018 | 2019 | 2020 | Comments |
|------------------|------------|------------|------------|--|
| Shipping | 22 | 88 | 89 | 1FTE, Oct 2018 - Dec 2020 |
| Reception | 20 | 83 | 84 | 1FTE, Oct 2018 - Dec 2020 |
| Distribution | 29 | 116 | 118 | 1.5FTE, Oct 2018 - Dec 2020 |
| Storage areas | 40 | 83 | 84 | 2FTE, Oct 2018 - Dec 2018 1FTE, Jan 2019 – Dec 2020 |
| Vehicle purchase | 60 | | | For internal distribution |
| TOTAL | 171 | 370 | 375 | |

Radioactive storage areas (SMB-SC)

- Extra radioactive storage surface needs assessed at: 2'613 m²
- Foreseen plan:
 - Update dosimetry measures for all equipment stored in b.954 and b.955 (DONE)
 - Define the threshold to classify light radioactive equipment (2017)
 - New Multi-Purpose Building (MPB) (mid-2018)
 - Transfer light radioactive equipment from b.954 and b.955 to MPB (2018-2019)

Stores (SMB-SC)

- LS1 generated a turnover increase (similar pattern as other activities within the group)
- Same FTE level as in 2014 to be planned
- **Included in the MTP**



| Budget (kCHF) | 2018 | 2019 | 2020 | Comments |
|----------------------|-----------|------------|------------|---------------------------|
| Product management | 55 | 112 | 113 | 1FTE, Jul 2018 - Dec 2020 |
| Standard storekeeper | 20 | 83 | 84 | 1FTE, Oct 2018 - Dec 2020 |
| TOTAL | 75 | 195 | 197 | |

Waste (SMB-SC)

- Additional waste produced during LS2 generates extra disposal costs
- A budget complement will be necessary (similar to LS1 +50% overcost linked to passing through customs in Ferney)
- **Included in the MTP**

| Budget (kCHF) | 2019 | 2020 |
|---------------|------|------|
| Waste | 38 | 289 |



Cleaning (SMB-SIS)

- LS2 cleaning activities should include:
 - Barracks / Bases de vie
 - Tunnels and experimental caverns
- Same scope as during LS1
- **On request – Not included in the MTP**



| Budget (kCHF) | 2019 | 2020 |
|---------------|------|------|
| Cleaning | 178 | 232 |

Mobility (SMB-SIS)

- Increased number of visitors during the shutdown.
- Hiring of an extra VIP shuttle driver (as during LS1) ?
- Back to 3 on-demand drivers (2014 level) ?
- **On request – Not included in the MTP**

| Budget (kCHF) | 2019 | 2020 | Comments |
|-----------------|------------|------------|---------------------------|
| Shuttle drivers | 154 | 157 | 2FTE, Jan 2019 - Dec 2020 |
| Shuttle rental | 70 | 70 | 27-seat shuttle |
| TOTAL | 224 | 227 | |

- The eventual increased number of cars during the shutdown is charged directly to the requesters.

Site Security (SMB-DI)

- Mission ZORA:
 - Intervene in less than 1 hour 7h-19h working days (peak activity), and in 2 hours the remaining time (24/24), on the set of accelerators and experimental areas, on the surface and underground (controlled areas of the radiation protection point of view).
 - Guide remote mobile agents and give them the appropriate response instructions for carrying out their missions.
 - Continuously monitor physical perimeters of accelerator complex, intervene, inform, and analyze incidences.
 - Manage visitor access and keep traceability.
 - Take remotely the control equipment introduction in case of user incidencies.
 - Exchange with BE-ICS-AC for developments, tools, training and feedback

Site Security (SMB-DI)

- Mission monitoring worksites
 - In the case of lifts rehabilitation and interventions on PAD and MAD.
 - Access control to the site using portable access control case, during the works period.
- Material protection
 - To avoid thefts of hardware and cables occurred during LS1 we should better protect our sites and be more "directive" with contractors.
 - A solution could consist to provide dedicated spaces, equipped with electronic surveillance (video, fences, lighting ...). The question of the liability in case of theft needs to be clarified.
 - The investments shall be evaluated according to the needs.

Site Security (SMB-DI)

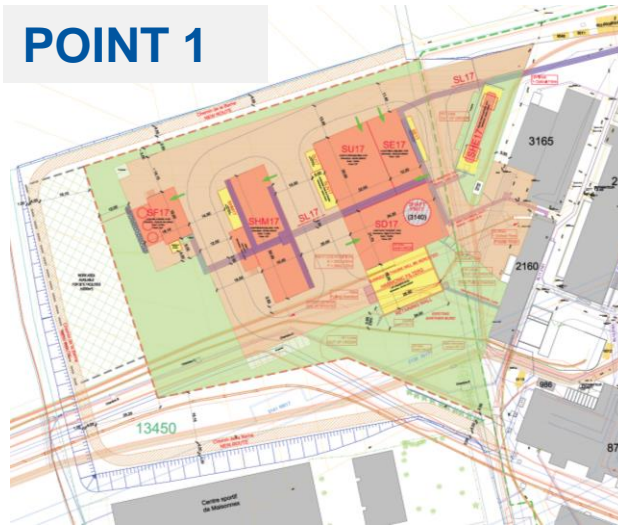
- Mission ZORA
 - 1 agent at CSA de 7h00 à 19h00 – 76 k€/y
 - 1 patrol agent for ZORA 24h/24h - 203 k€/y
- Worksite monitoring
 - 2 agents 7h00 à 19h00 – 152 k€/y
- 3 vehicles - 12 k€/y
- **On request – not included in MTP**

| Budget (kCHF) | 2019 | 2020 | Comments |
|---------------------|------------|------------|---------------------------|
| Zora CSA | 76 | 76 | 1FTE, Jan 2019 - Dec 2020 |
| Zora patrol agent | 203 | 203 | 2FTE, Jan 2019 - Dec 2020 |
| Worksite monitoring | 152 | 152 | 1FTE, Jan 2019 - Dec 2020 |
| Vehicles | 12 | 12 | |
| Material protection | | | Not evaluated yet |
| TOTAL | 443 | 443 | |

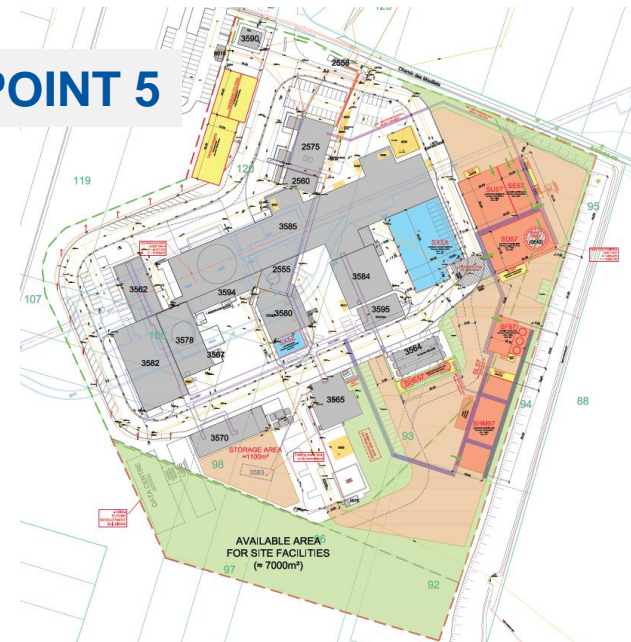
Large civil Projects (SMB-SE)

- HL-LHC WP17.1 civil engineering works
- **Critical activity during LS2, large worksites and earthmoving for the pits and caverns excavations.**

POINT 1



POINT 5



Large civil Projects (SMB-SE)

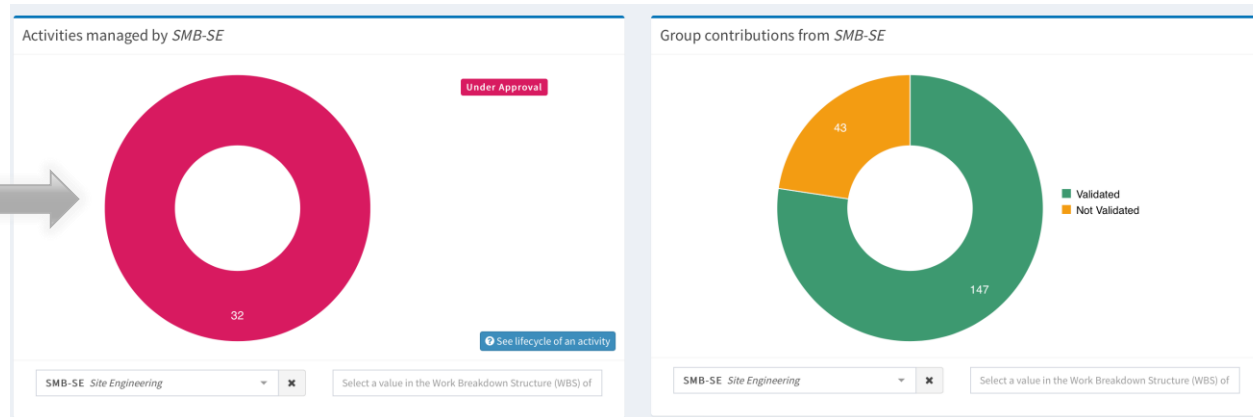
- SPS Dump
- Infrastructure consolidation projects
- Accelerator consolidation projects
- ISR – RWTC infrastructure works
- B947 - New FLEX storage building
- B90 – New main building

Medium civil Projects (SMB-SE)

- SPS fire safety
- SVC MEQ 59
- New substations buildings for the SPS
- SM18 extension for RF
- New SF18 cooling towers
- East hall cladding consolidation
- Etc.

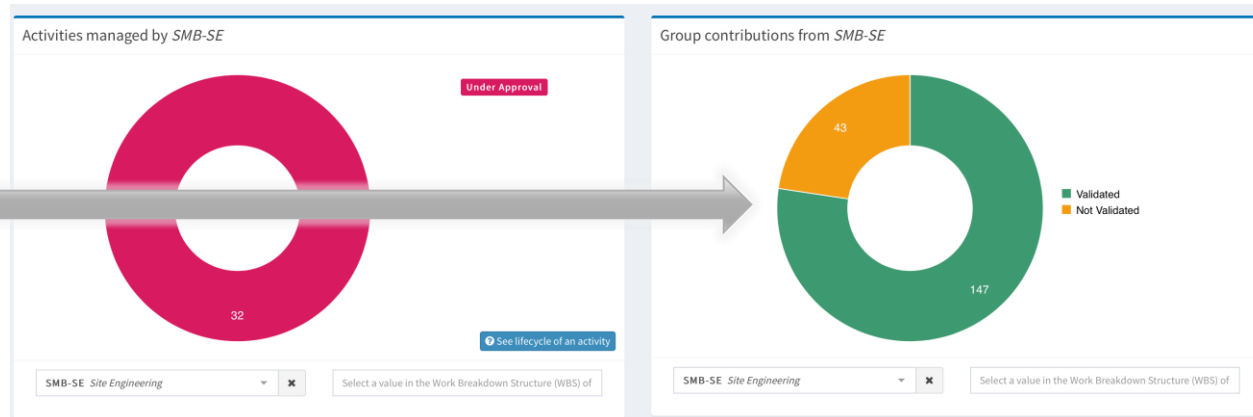
Maintenance of the infrastructures (SMB-SE)

- Maintenance of the infrastructures only accessible during the long shutdowns (for example: tunnel floors and drains, underground sanitary equipment, roofs of operational buildings, etc.)
- Included in the PLAN activity managed by SMB-SE
- **Included in the MTP**



Group contributions (SMB-SE)

- **190 requests** by equipment groups in their activities during the long shutdown (for example: creation of slabs, excavation of trenches, concrete coring, shieldings, etc.).
- From the LS1 experience, 5-10 additional FSU to complement staff in the supervision of worksites due to the amount of work requests.
- **Resources available – limit reached.**



Concluding remarks

- Attention to the CE works for HL-LHC.
- The budget required for the projects and the works requests is not considered in our budget requests.
- The personnel resources for the currently approved projects will be made available and covered by the actual SMB resources.
- Most of the estimates are based on LS1 experience. A clearer view of the requests from the other groups will be given after the exercise with the PLAN tool and these LS2 days.

QUESTIONS ?

