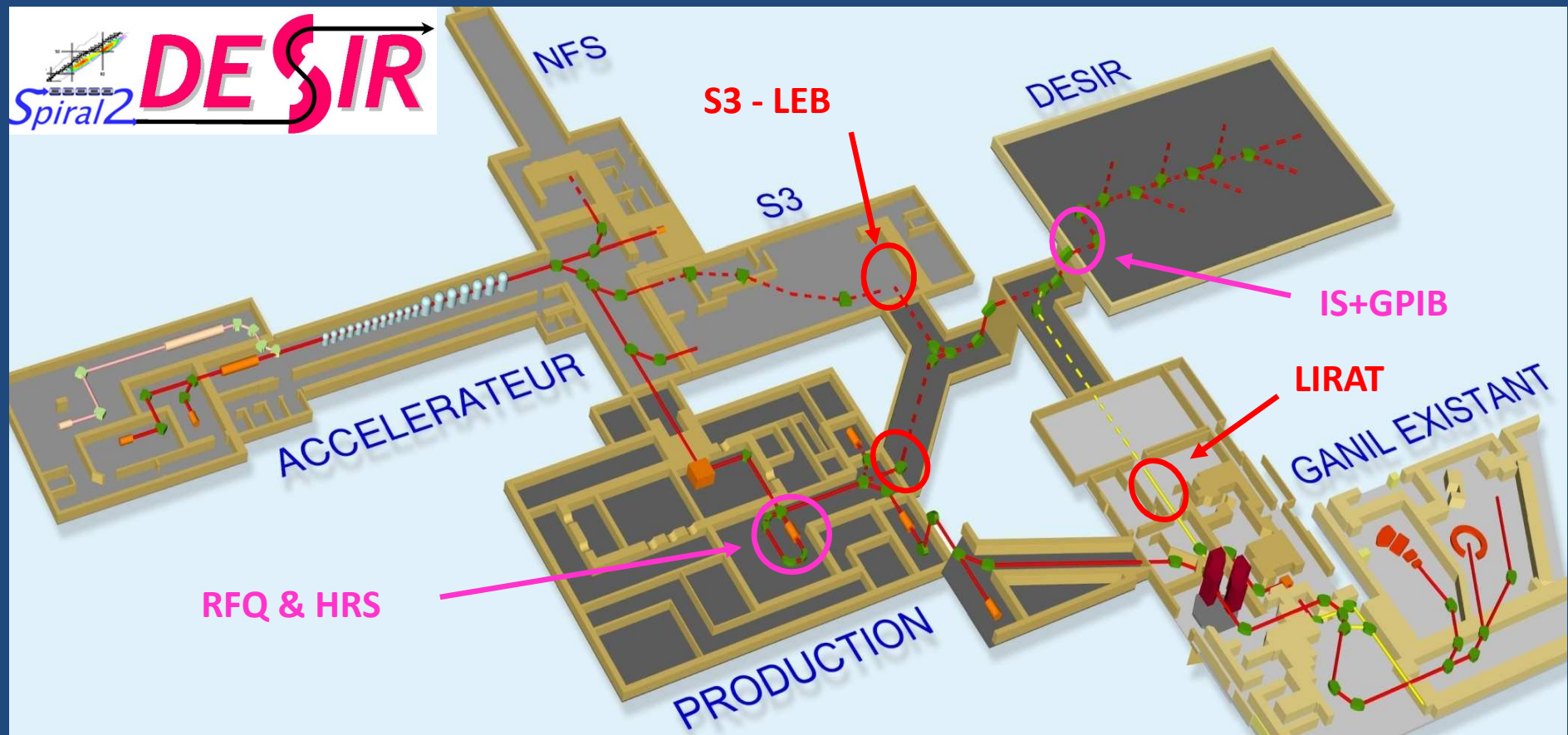


DESIR EQUIPEX

Financing - Constrains - Solutions

<http://www.cenbg.in2p3.fr/desir>



DESIR-EQUIPEX planning

Initial SP2 Ph2 construction planning (Nov 2010)

	2012				2013				2014				Start	Stop	Start of equipment installation
	T1	T2	T3	T4	T1	T2	T3	T4	T1	T2	T3	T4			
Production building			█		█				█				07/12	10/14	
DESIR building								█		█			10/13	8/14	07/14
S1-DESIR liaison							█		█			9/13	07/14	05/14	
S2-DESIR Liaison					█		█		█				5/13	02/14	02/14
S3-DESIR Liaison					█		█		█				5/13	02/14	02/14

- DESIR-EQUIPEX planning: from July 2012 to December 2019 = 90 months
 - Phase 1, 36 months: building construction + equipment installation and commissioning
 - Phase2, 54 months: facility operation from July 2015 to December 2019

- Considering 18 months delay for the beginning of the construction
 - Phase 1, 54 months
 - Phase2, 36 months: from January 2017 to December 2019

DESIR-EQUIPEX costs

	PH1			PH2		
	PH1	Tot_Ph1	Invest. Manag.	PH2	Tot_Ph2	Invest. Manag.
Coordination	0	83	83	0	93	97
Builbings	7416	0	7416	543	0	564
Beam lines	5460	17	5477	225	0	234
Ident. Sta.	209	10	219	9	0	9
GPIB	390	97	487	18	0	19
Ion Source	59	1	60	5	0	5
Meca. Wks	57	1	57	9	0	9
SPR Lab.	87	1	88	14	0	14
C&C	150	65	215	135	1	142
	353	67	420	162	1	170

Equip. Construction (k€)		
PH1	Tot_Ph1	Invest. Manag.
13828	274	14102

Equip. Operation (k€)		
PH2	Tot_Ph2	Invest. Manag.
957	94	1093

➤ DESIR-EQUIPEX funding: 9 M€ <-> 6.2 M€ missing

- Investment cost reductions?

- Co-financing , partnerships?

DESIR-EQUIPEX cost reductions

- Use of the PIPERADE RFQ and ion sources to replace the GPIB: ~550 k€
- Shorter operation time within the EQUIPEX program (36 months): ~550 k€
- Phasing of the beam-line construction: ~1600 k€
 - Inside DESIR: ~30 m, 1200 k€
 - Option 1: From S2 to DESIR: ~70 m, 2700 k€ (~39 m, 1500 k€)
 - Option 2: From S3 to DESIR: ~43m, 1700 k€ (~10m, 400 k€)
 - Option 3: From S1 to DESIR: ~50 m, 1900 k€ (~35 m, 1400 k€)
- Surface reduction of the DESIR hall and underground: ~ 1000 k€?
 - DESIR hall by 40%
 - DESIR underground by 20%

Total: ~3600 k€

- Still 2.6 M€ missing

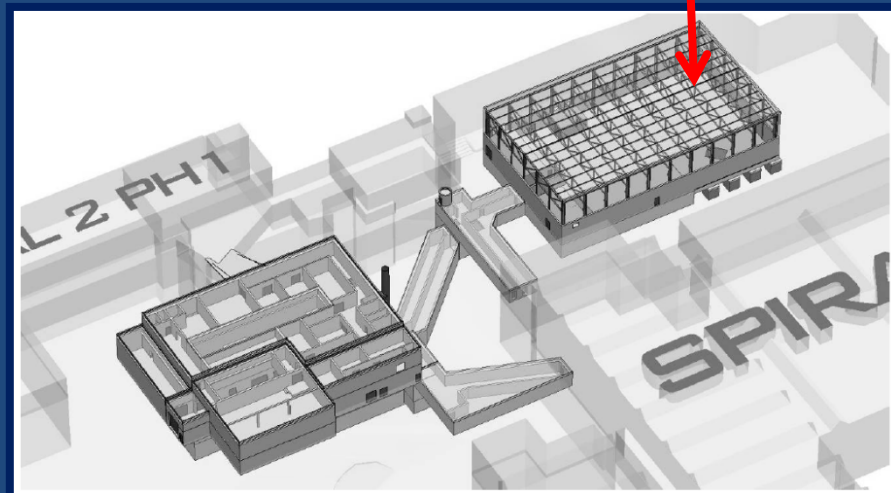
DESIR-EQUIPEX co-financing

- SPIRAL2-BARC collaboration for the construction of the mechanics of the beam lines:
~800 k€ to be discussed
- European financing program to pay the beam-lines?
- Help from the IN2P3 and from GANIL?
- Help from the Région Basse-Normandie?
- Still 2.6 M€ to 5.1 M€ (no reduction, no phasing) missing

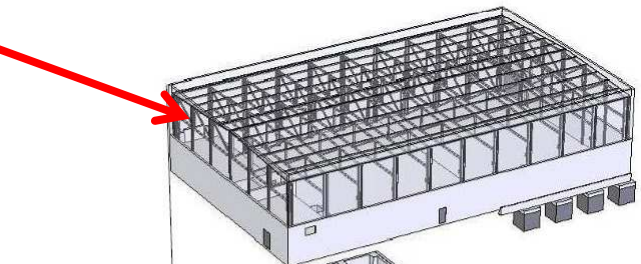
- **GANIL/SPIRAL2 contribution
(management, financing)**
- **Construction planning**
- **EQUIPEX funding distribution**
- **Complementary funding
(Région Basse-Normandie, IN2P3, Europe, International
collaboration agreements)**



DESIR buildings



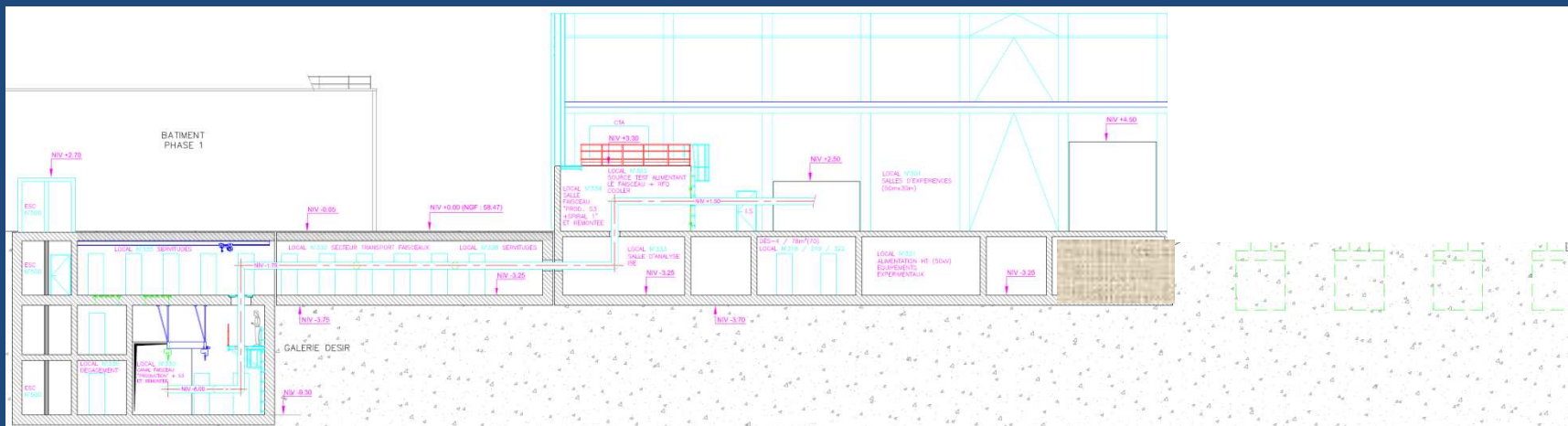
Exp. Hall (900/1600 m²)



**Supply and
preparation rooms
(570/980 m²)**

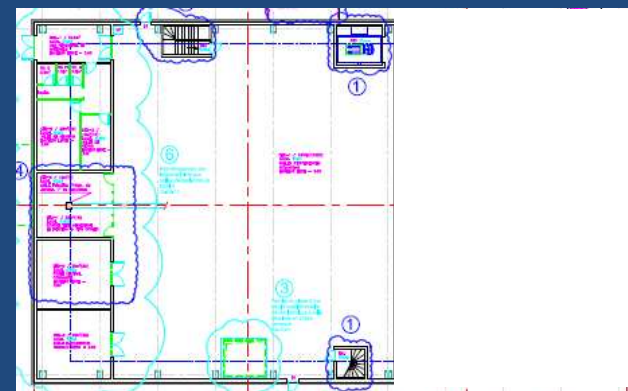
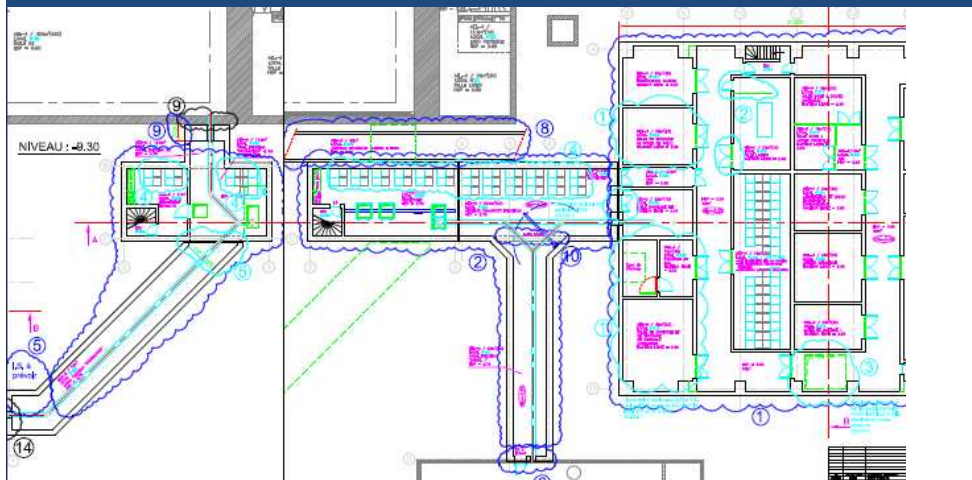
**Beam transport
tunnels (370 m²)**

DESIR buildings - APS

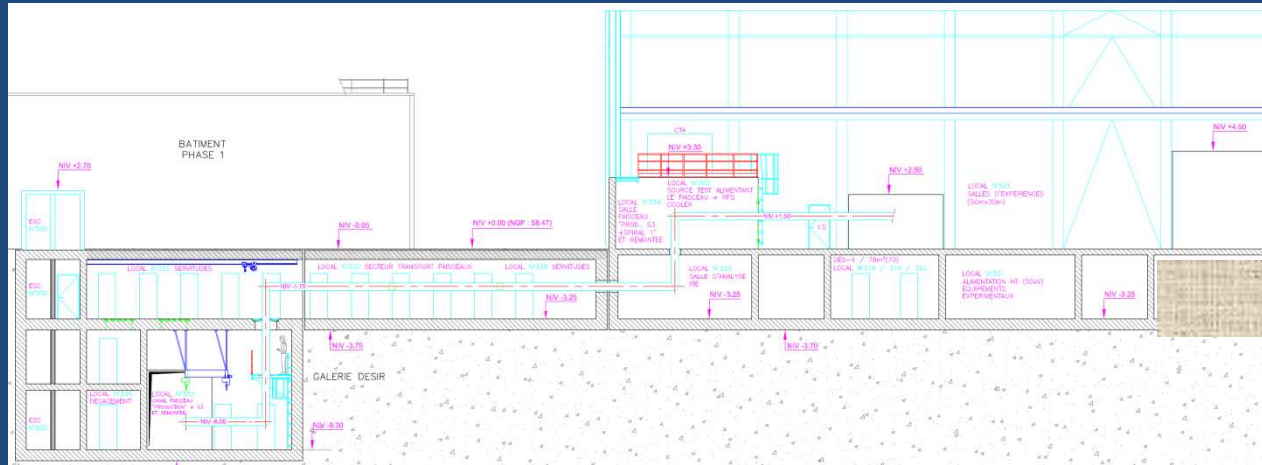


Basement and beam transport tunnels

Experimental hall

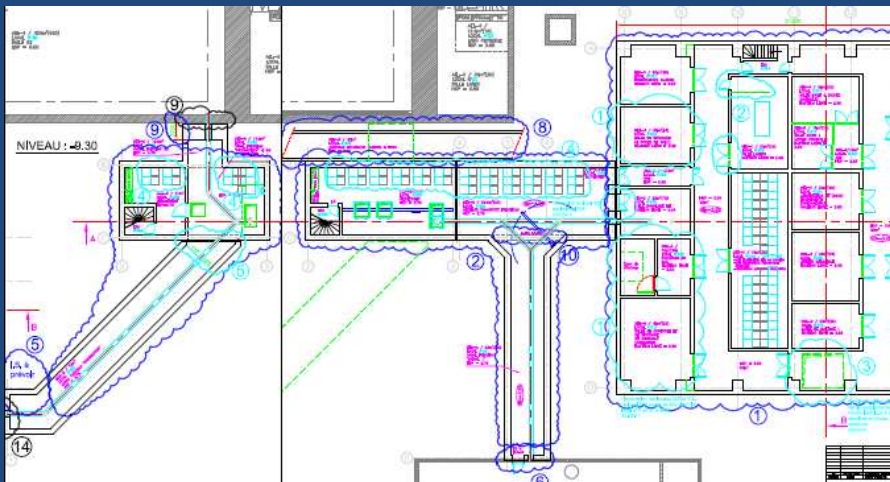


DESIR buildings - Reduction



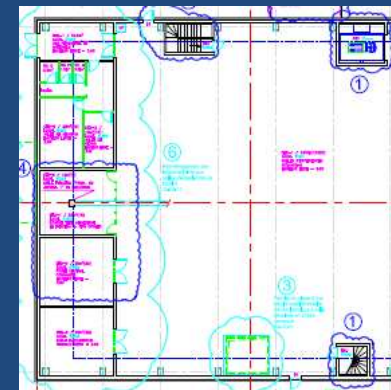
Underground and beam transport tunnels

Experimental hall



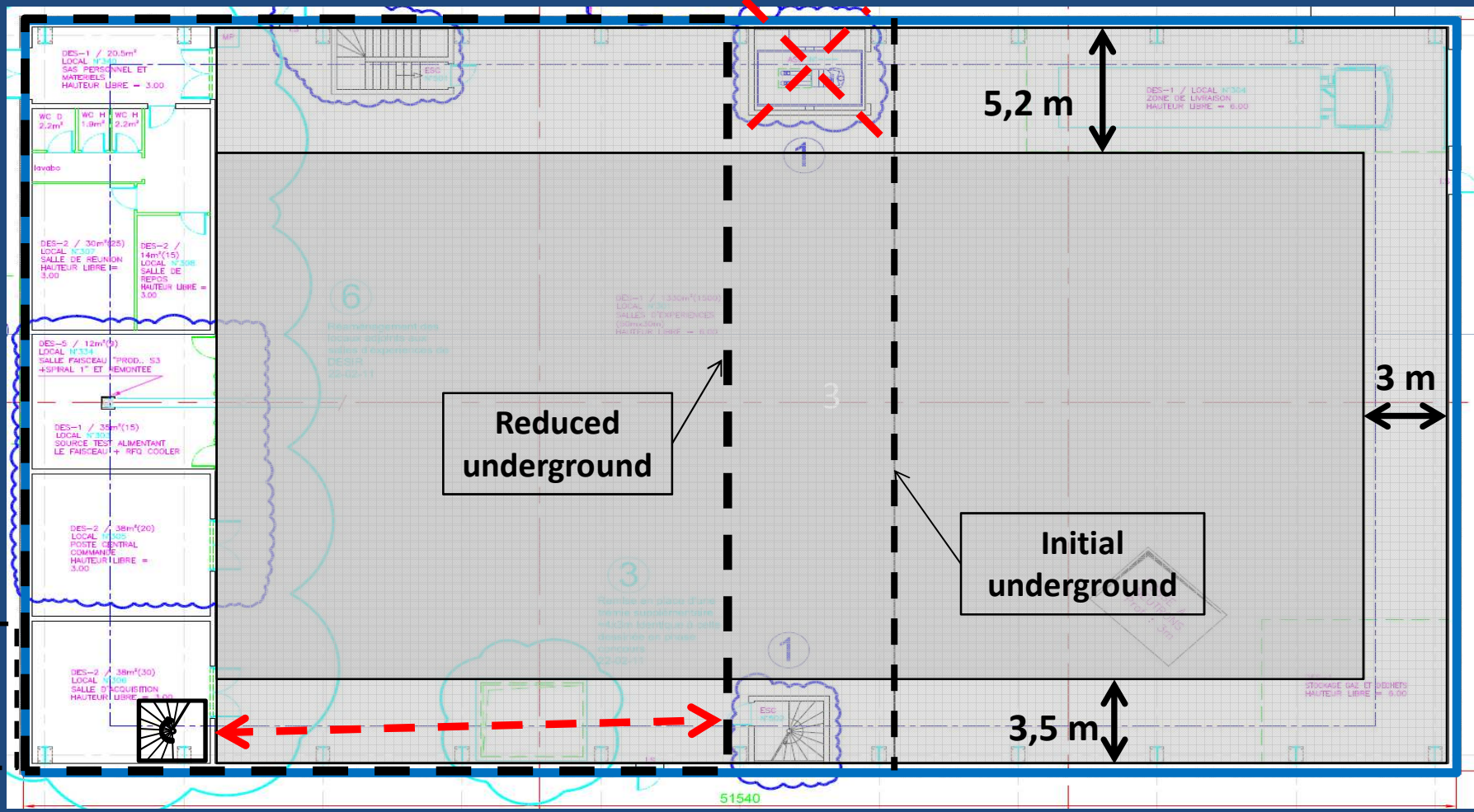
Supply and preparation rooms (430/790 m²)

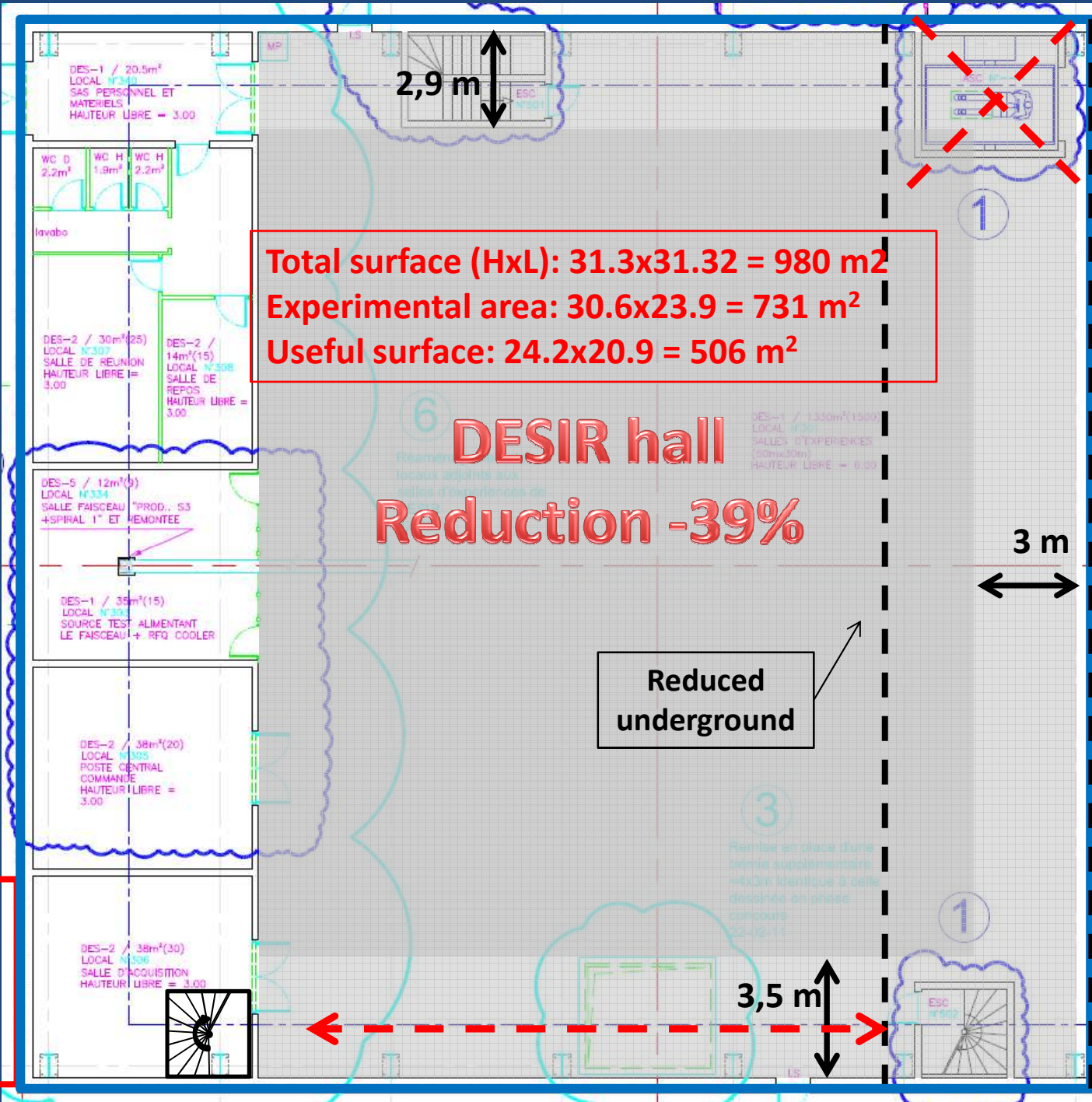
Exp. Hall (500/980 m²)



DESIR Hall: initial drawing

Total surface (HxL) : $31.3 \times 51.54 = 1613 \text{ m}^2$
Experimental area: $30.6 \times 44.3 = 1356 \text{ m}^2$
Useful surface: $21.9 \times 41.3 = 904 \text{ m}^2$





Total surface (HxL): 31.3x31.32 = 980 m²
Experimental area: 30.6x23.9 = 731 m²
Useful surface: 24.2x20.9 = 506 m²

DESIR hall

Reduction -39%

**Transformateurs
 eurs
 323 - 21 m²**

**Reduced
 underground**

Distrib. Fluides
327 – 30 m²
LOCAL N°327
 DISTRIBUTIONS FLUIDES
 HAUTEUR LIBRE = 2.95

Stockage
315 – 31 m²
LOCAL N°315
 SALLE DE STOCKAGE
 (4 BOXES DE 10m²)
 HAUTEUR LIBRE = 2.95

SAS
339 – 10.5 m²
DES-3 / 10.5m²(15)
 LOCAL N°339
 SAS

IBE
333 – 25 m²
DES-3 / 25m²(15)
 LOCAL N°333
 SALLE IBE
 HAUTEUR LIBRE = 2.95

Stockage gaz
326 – 31 m²
DES-4 / 30m²(30)
 LOCAL N°326
 STOCKAGE DE GAZ
 HAUTEUR LIBRE = 2.95

SPR
316 – 48 m²
DES-3 / 48m²(25)
 LOCAL N°316
 SALLE DE CONTROLE ET
 DE STOCKAGE
 DE MATERIELS
 CONTAMINES
 HAUTEUR LIBRE = 2.95

Couloir Est
93 m²

Couloir Nord
30 m²

Couloir Ouest
93 m²

Monte charge
20.5 m²

LASER
318 – 41 m²
DES-1 / 27m²(30)
 LOCAL N°302
 SALLE LASERS
 HAUTEUR LIBRE = 2.95

Grise2
311 – 24 m²
DES-2 / 24m²(25)
 LOCAL N°311
 SALLE GRISE 2
 HAUTEUR LIBRE = 2.95

Grise1
310 – 14.8 m²
DES-2 / 14.8m²(15)
 LOCAL N°310
 SALLE GRISE 1
 HAUTEUR LIBRE = 2.95

SAS Grise
337 – 9.2 m²
DES-2 / 9.2m²(15)
 LOCAL N°337
 SAS GRISE

Servitudes
318 – 77.5 m²

HT Exp.
321 – 30 m²
DES-4 / 30m²(30)
 LOCAL N°321
 SALLE HT
 HAUTEUR LIBRE = 2.95

Atelier Méca.
309 – 36 m²
DES-2 / 36m²(25)
 LOCAL N°309
 SALLE ATTELIER
 HAUTEUR LIBRE = 2.95

Tota surface: 31.3x31.32 = 980 m²
Useful surface: 566 m²

Montage1
312 – 23 m²
DES-3 / 23m²(25)
 LOCAL N°312
 SALLE DE MONTAGE 1
 HAUTEUR LIBRE = 2.95

Couloir Sud
41 m²

2,5 m

Distrib. Elec.
324 – 63 m²
DES-4 / 34m²(50)
 LOCAL N°324-1
 LOCAL ELECTRICITE
 SOUS-TENSION TERT
 HAUTEUR LIBRE = 2.95

Montage2
313 – 36 m²
DES-3 / 27m²(30)
 LOCAL N°313
 SALLE DE MONTAGE 2
 HAUTEUR LIBRE = 2.95

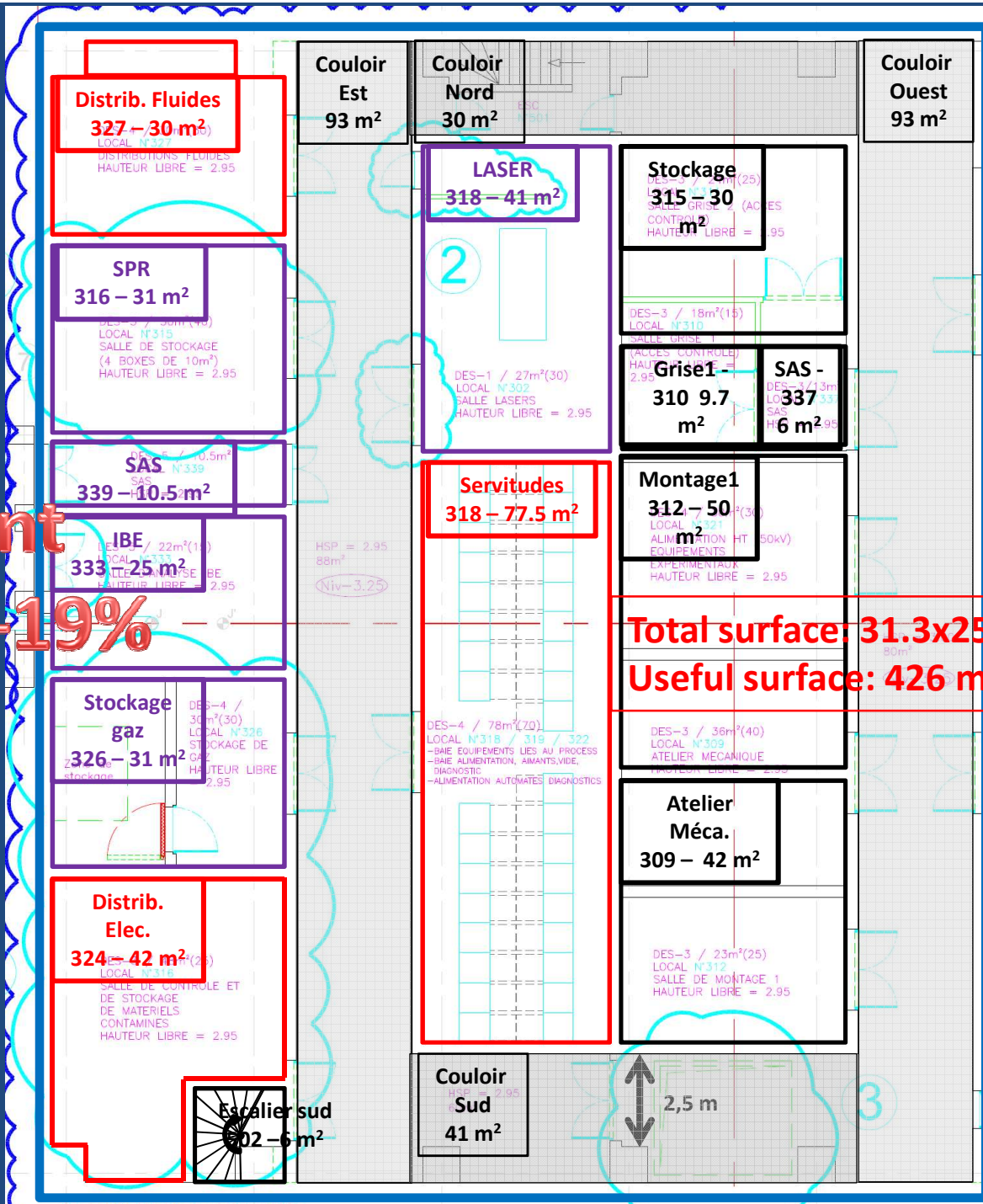
Montage3
314 – 36 m²
DES-3 / 37m²(40)
 LOCAL N°314
 SALLE DE MONTAGE 3
 HAUTEUR LIBRE = 2.95

Escalier sud
502 – 15 m²

**Basement:
 Initial drawing**

Permutation des locaux 326 et 315.

**Basement
reduction -19%**



**Total surface: 31.3x25.3 = 792 m²
Useful surface: 426 m²**

Permutation des locaux 326 et 315.