

***From a university
laboratory to an
open access facility***

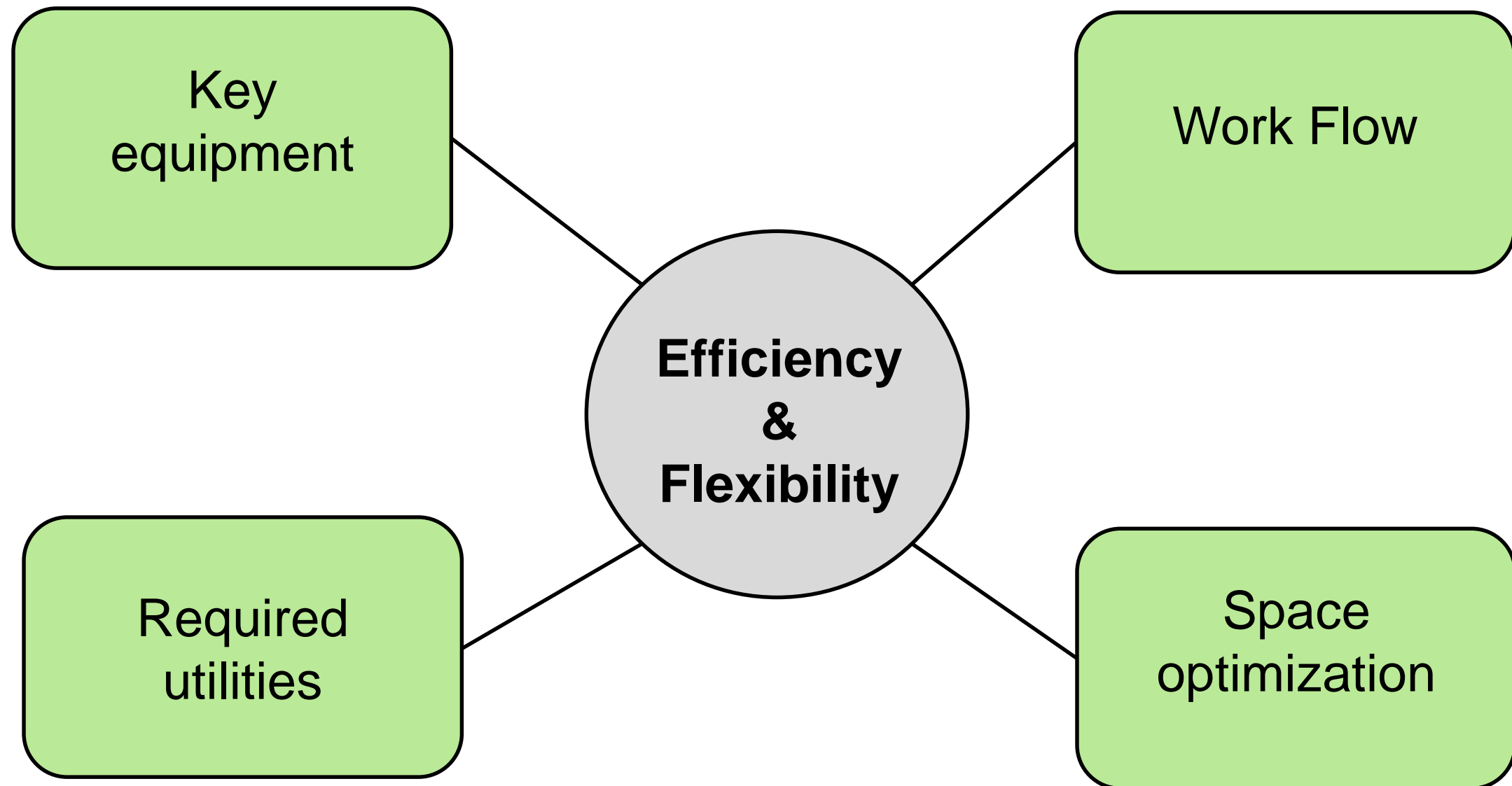


Supported by The Scottish Funding Council,
Highlands and Islands Enterprise and
Scottish Enterprise.

Flexible Downstream Processing Centre (FlexBio)

- links to the Rapid Bioprocess Prototyping Centre in Glasgow
- takes the most promising bio-processes to prove they work at a scale that allows the move to commercialisation
- fills the current UK-wide gap in the provision of scale-up facilities at this semi-tech scale (15 - 100 litre)
- highly flexible, integrated approach to total process development on a single site.

Centre design



Centre design



Upstream

- different sources (mammalian or microbial cells)
- cross contamination risk
- dedicated equipment
- pilot scale

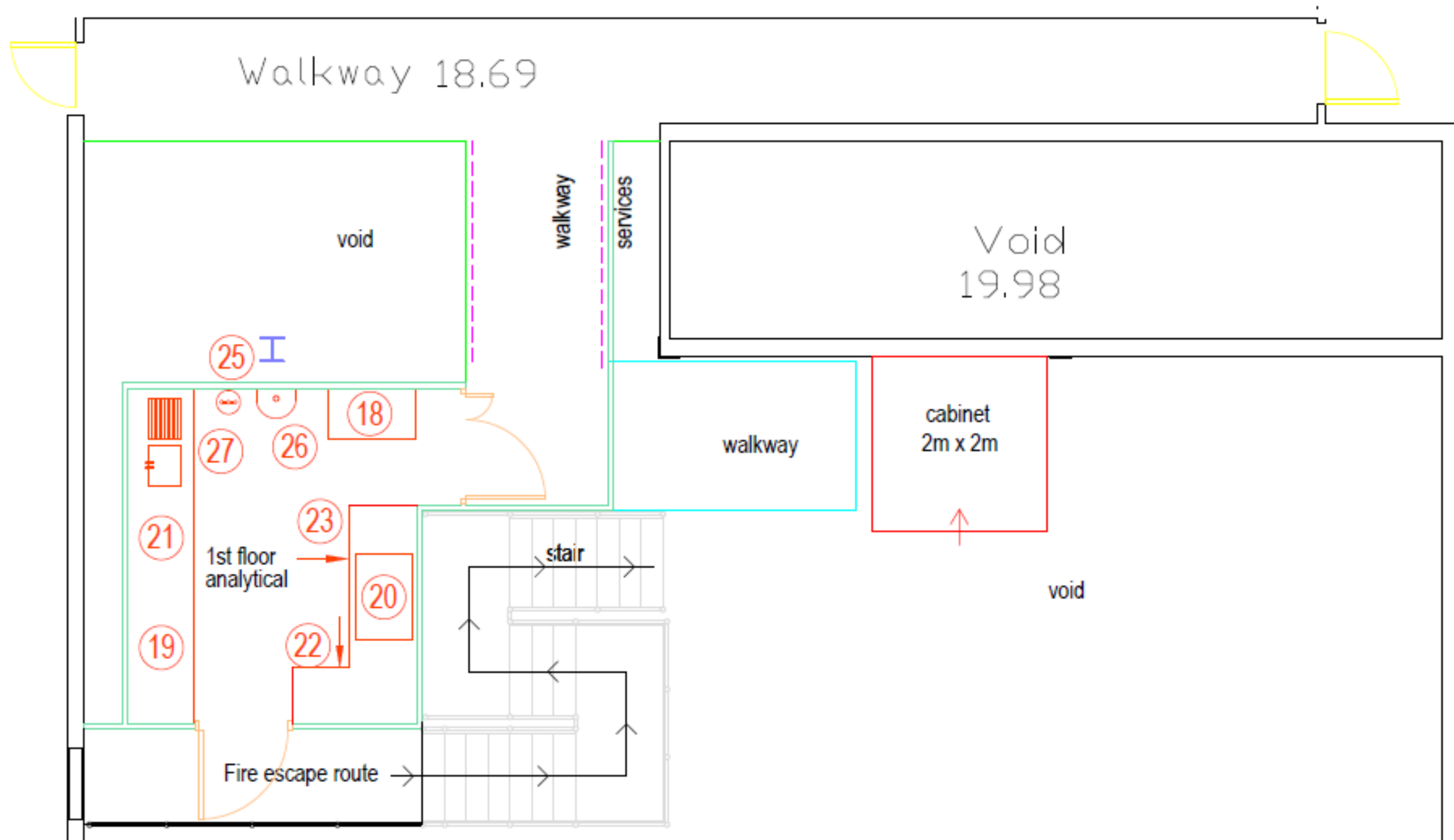
Downstream

- Key unit operations (filtration, chromatography, centrifugation, extraction)
- Multiple unit operation for each process
- Possibility to add equipment if needed

Process control

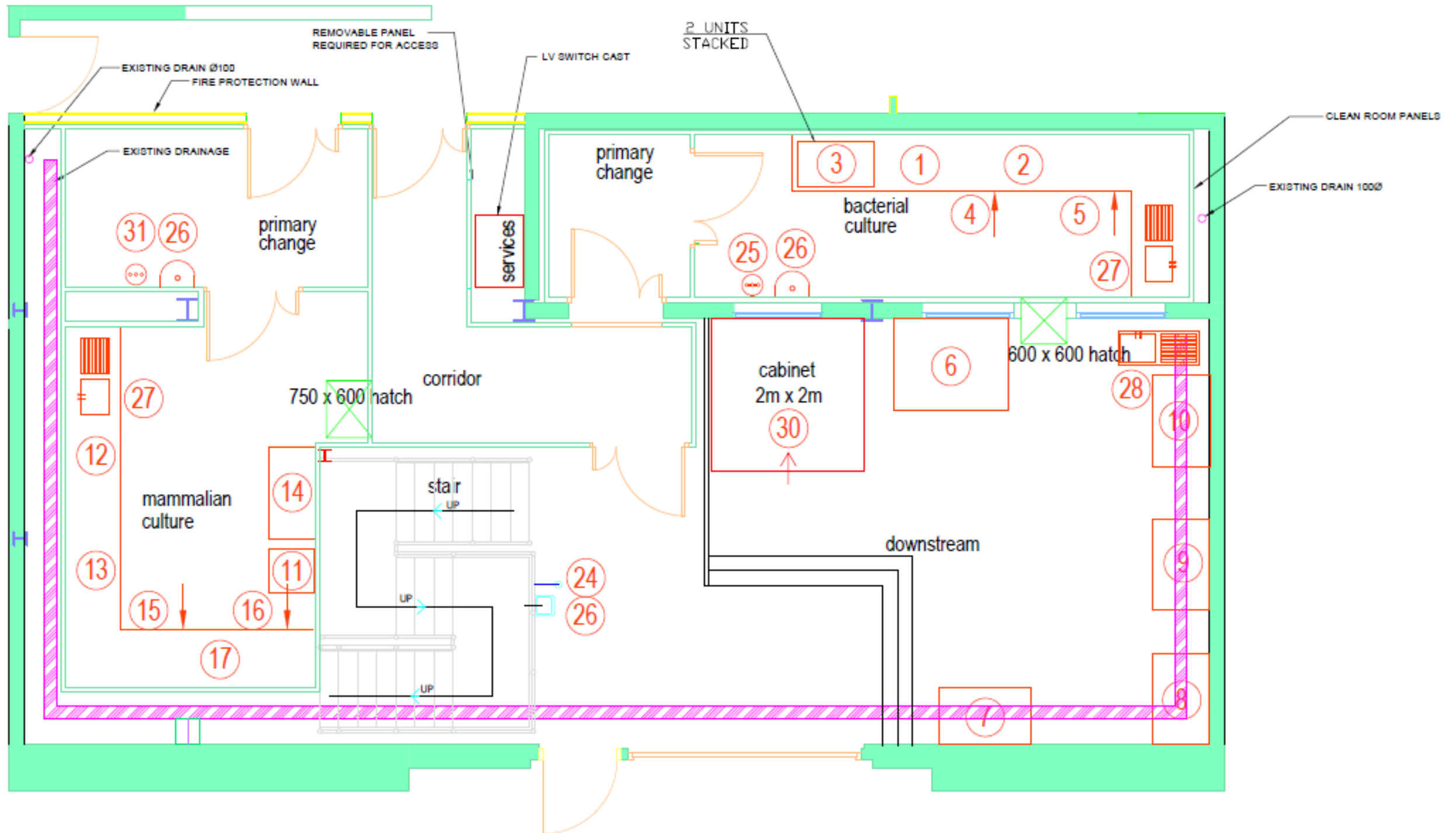
- Samples from upstream and downstream
- Identify and quantify interesting compounds
- Wide analysis spectrum

Centre design mezzanine level



MEZZANINE LEVEL

Centre design ground level



GROUND LEVEL

Mammalian cell laboratory



- Rocker system up to 50L
- Stirred Tank system up to 14L
- Single use reactor and bags to avoid cross contamination
- Dedicated DI and Ultrapure water source
- CO₂ incubator
- Gas lines CO₂, N, compressed air
- -80C Freezer with a dedicated space



Microbial cell laboratory



- Bench fermenter up to 7L
- Photobioreactor up to 7L
- Static incubator and shaker
- Dedicated DI water source
- Gas lines for N, compressed air
- Cooling water system



Downstream process area



- SIP 30L fermenter
- TFF unit 10L vessel or continuous use with bags
- 2m x 2m chemical hood
- AKTA avant 150
- Disk stack centrifuge 100L
- 4 Utility Stations with gas lines for N, compressed air, steam and cooling water



Analytical laboratory

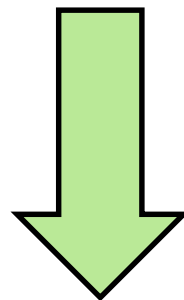
- GC
- HPLC
- QTOF-LC/MS paired with Bio-inert HPLC
- Plate reader
- Dedicated DI and Ultrapure water source



Facility features



- Interlock doors
- Controlled access (electronic card)
- Hatches from Mammalian and Microbial laboratory to Downstream process laboratory.
- Extraction system
- Equipment on trolleys (in downstream process area)
- Dedicated freezers and fridges in Analytical, Mammalian and Microbial laboratory



**Designed to enable a rational work-flow
avoiding contamination issues and to
provide a flexible facility**

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Or visit: www.ibioic.com



By 2030
our target is to generate
£1 to £1.5bn
of GVA contribution annually
to the Scottish economy;
this represents a growth of revenue
from 2012's estimated value of
£190m to between **£2**
and **£3bn**