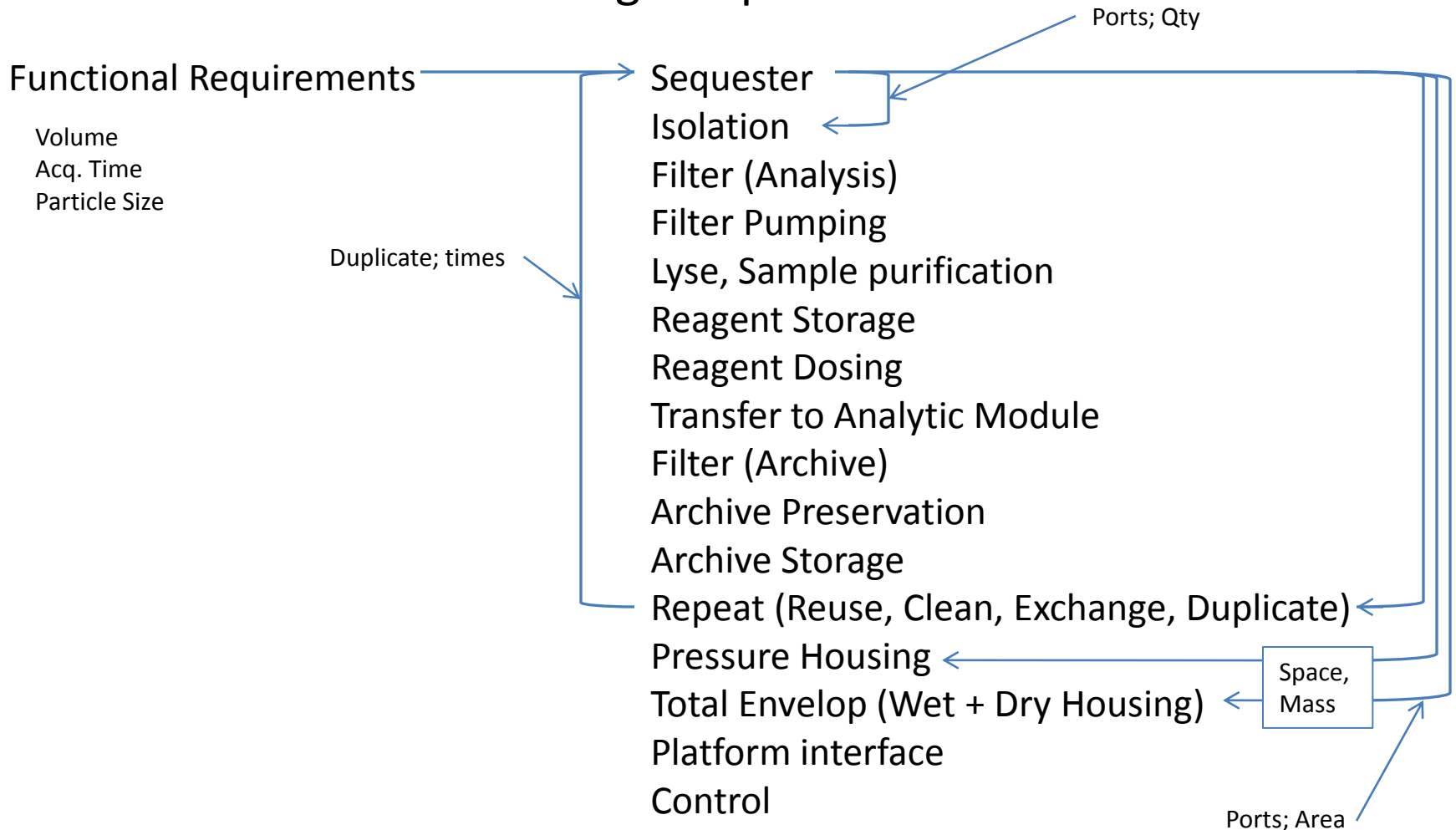
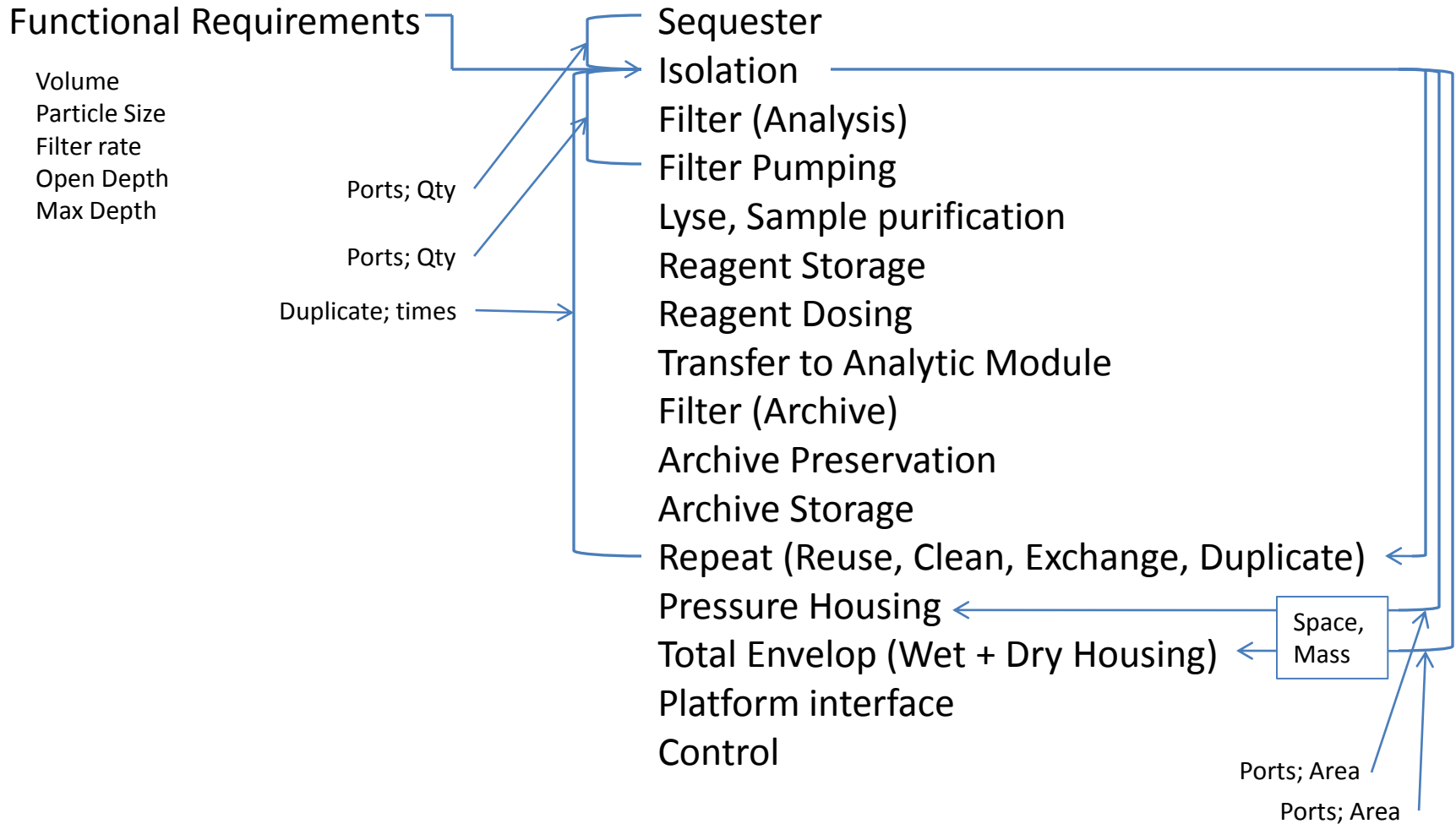


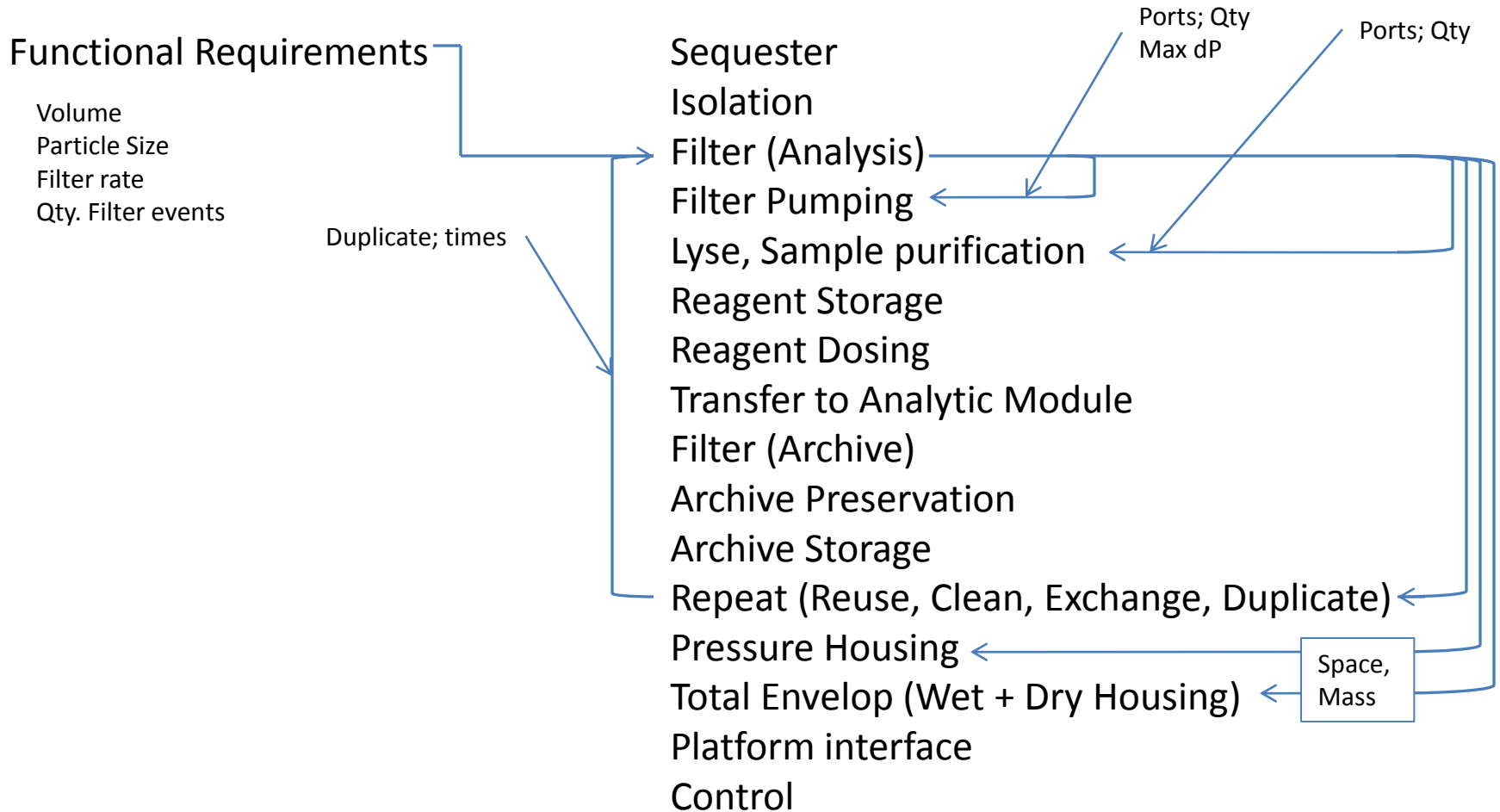
G3 ESP Design Dependencies



G3 ESP Design Dependencies



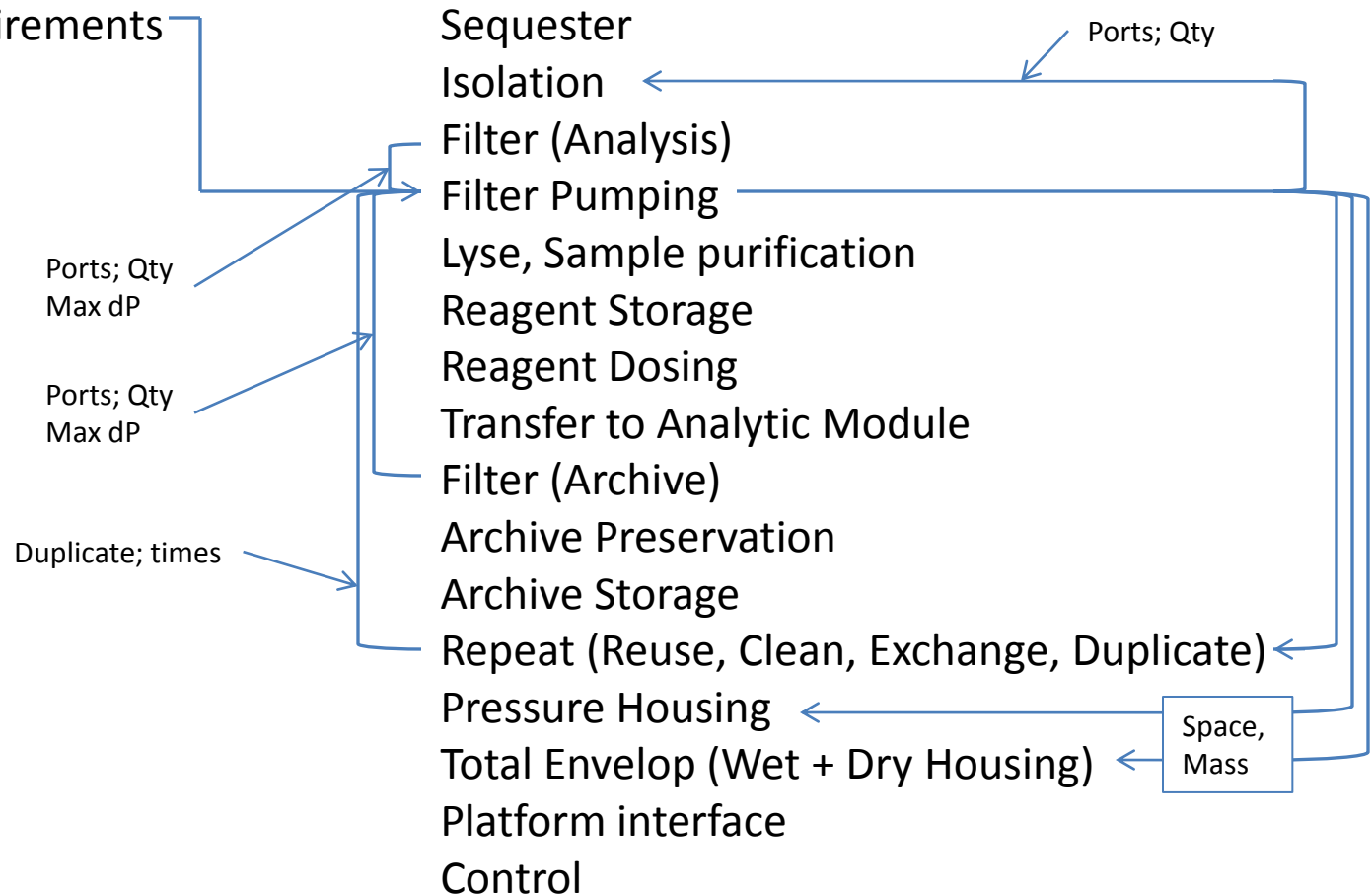
G3 ESP Design Dependencies



G3 ESP Design Dependencies

Functional Requirements

Volume
Particle Size
Filter rate



G3 ESP Design Dependencies

Functional Requirements

Lysate Vol; uL
Lysate Methods; qty

Ports; Qty

Lysate Vol; uL

Duplicate; times

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

Total Envelop (Wet + Dry Housing)

Platform interface

Control

Reagent vols

A: mL

...

Waste 1

Waste 2

Waste 3

Space,
Mass

G3 ESP Design Dependencies

Functional Requirements

Reagent numbers

Reagent vols

A: mL

B

C

D

E

F

G

H

I

J

Waste 1

Waste 2

Waste 3

Duplicate; times

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

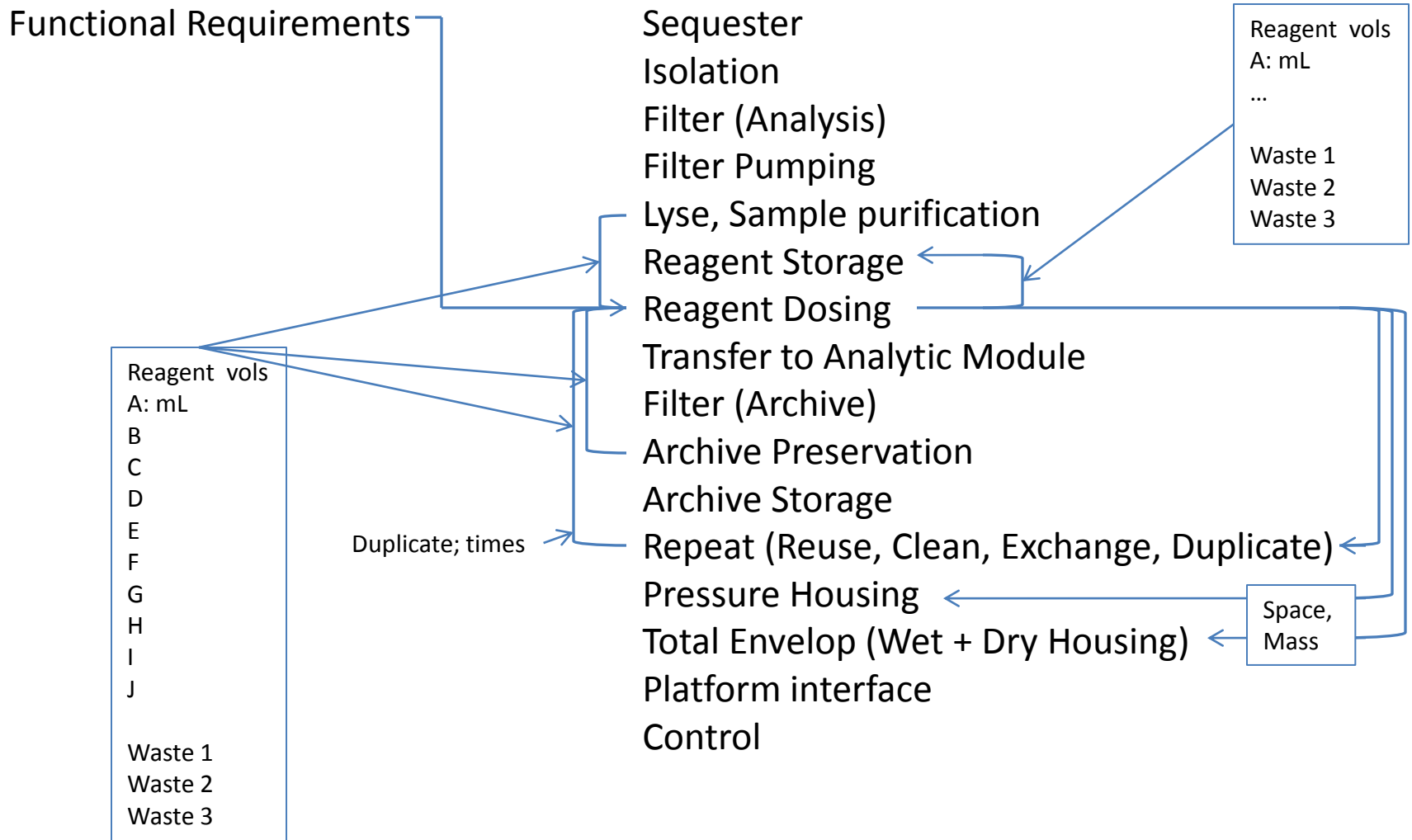
Total Envelop (Wet + Dry Housing)

Platform interface

Control

Space,
Mass

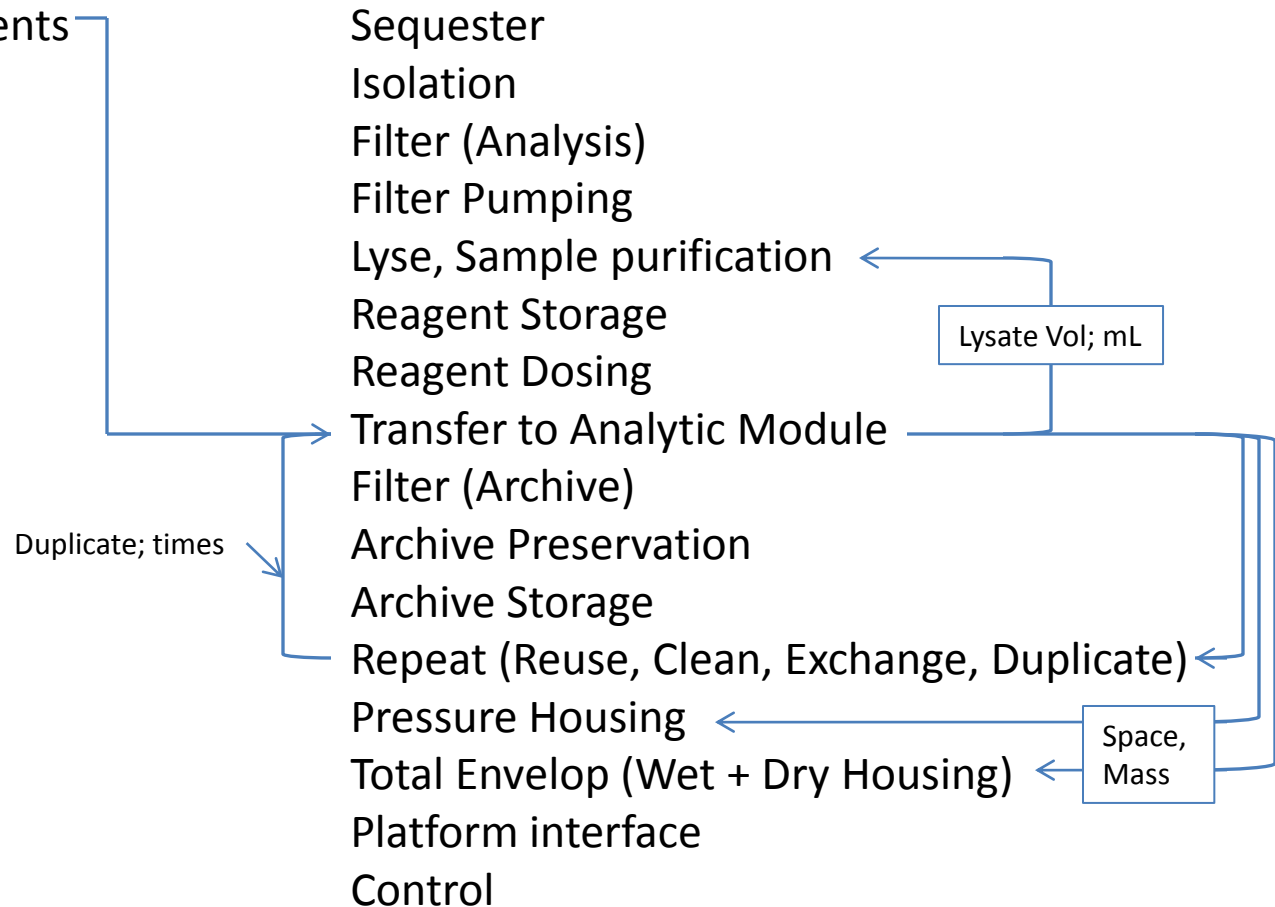
G3 ESP Design Dependencies



G3 ESP Design Dependencies

Functional Requirements

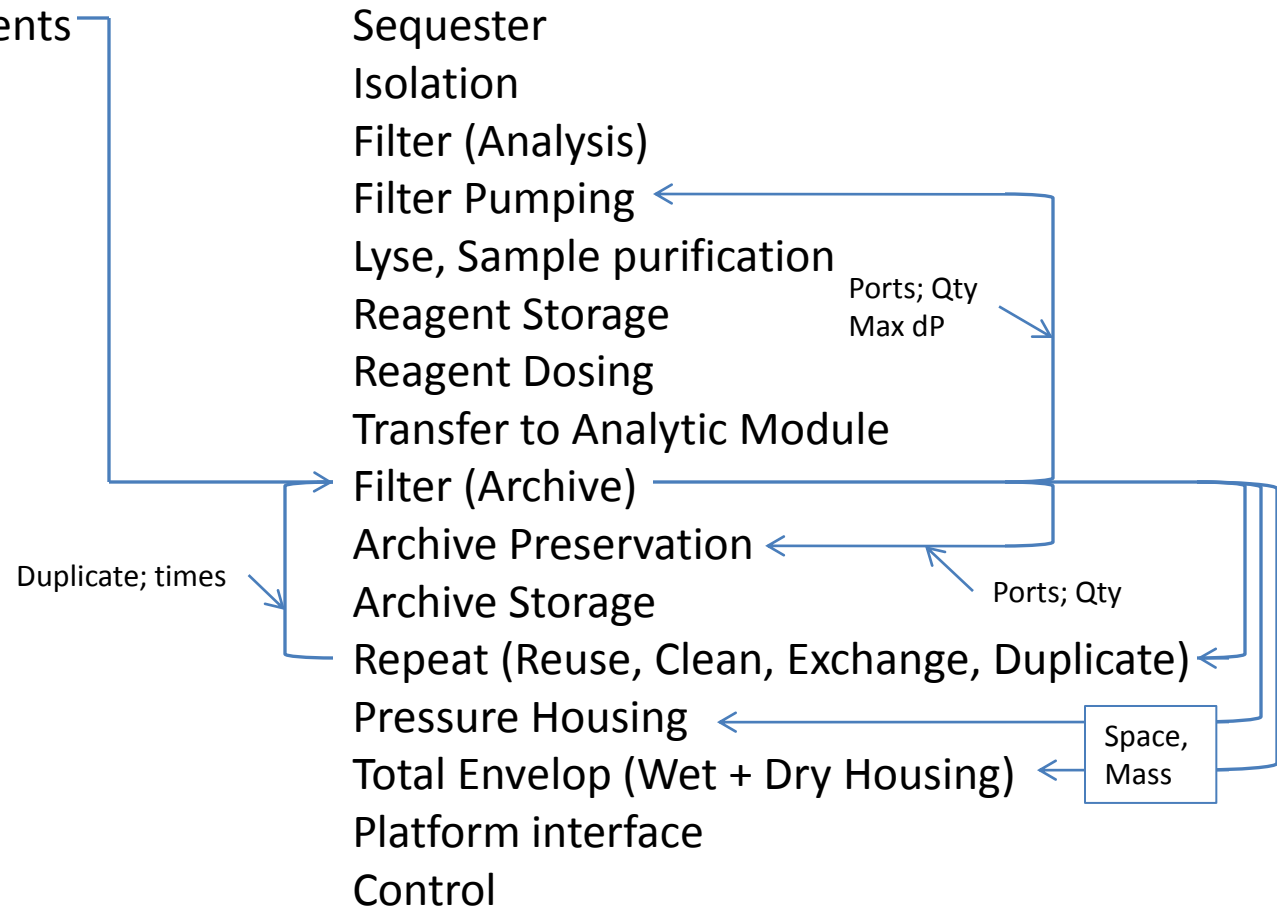
Lysate Vol; uL
Qty AM's; qty



G3 ESP Design Dependencies

Functional Requirements

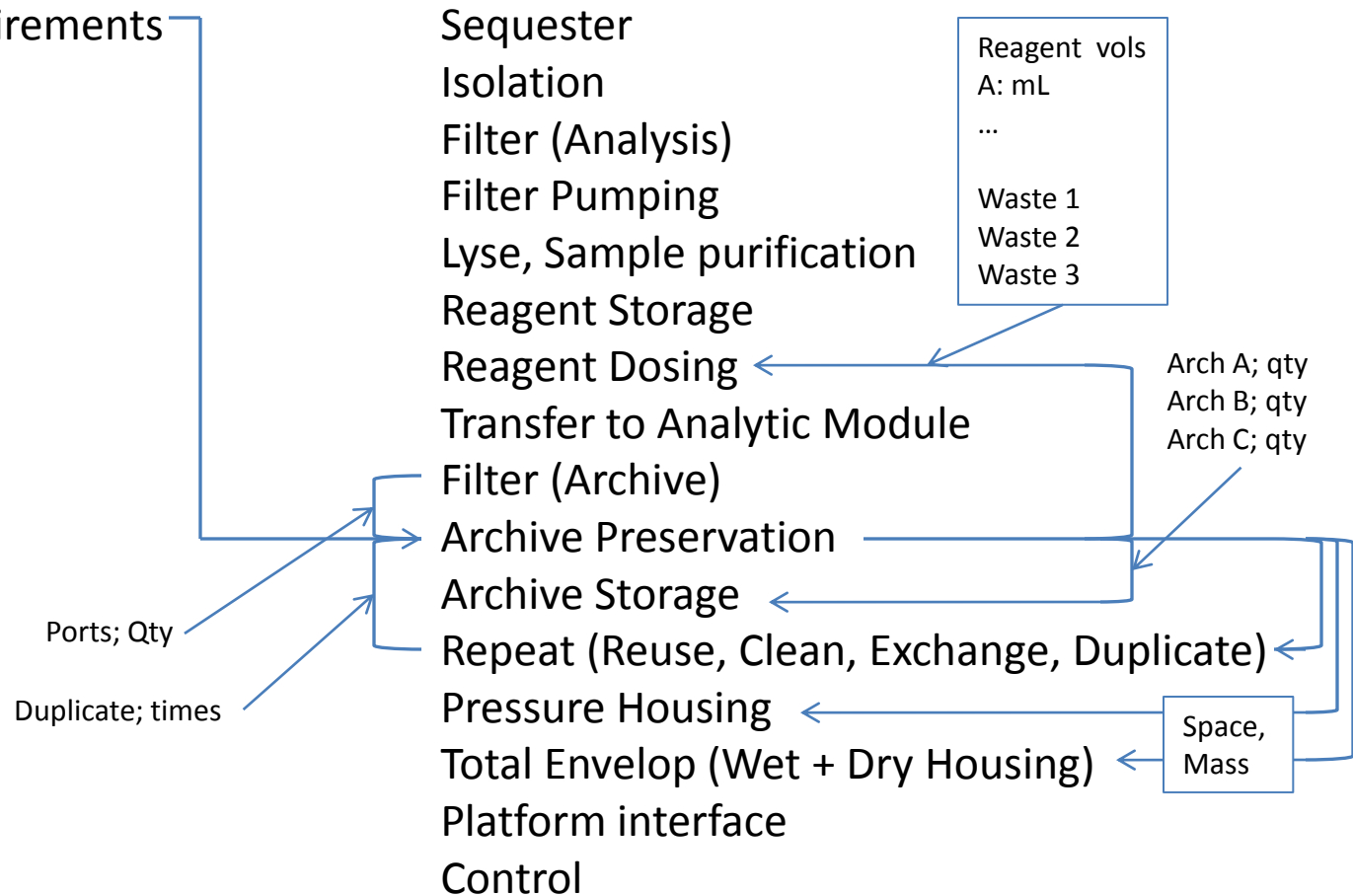
Volume
Particle Size
Filter rate
Archive Methods (qty)
Qty. Archive events



G3 ESP Design Dependencies

Functional Requirements

Archive Methods (qty)



G3 ESP Design Dependencies

Functional Requirements

Arch A; qty
Arch B; qty
Arch C; qty

Duplicate; times

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

Total Envelop (Wet + Dry Housing)

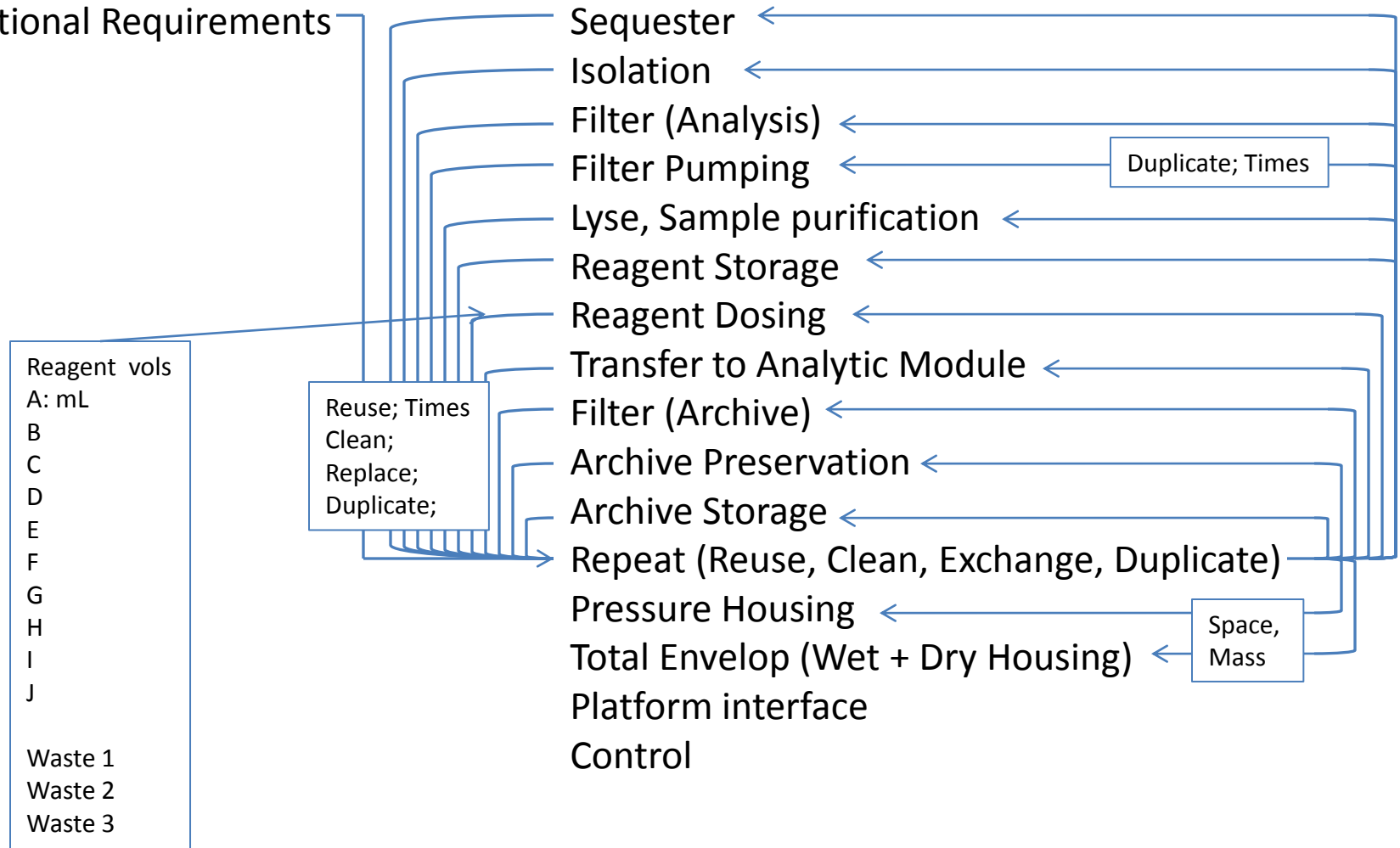
Platform interface

Control

Space,
Mass

G3 ESP Design Dependencies

Functional Requirements



G3 ESP Design Dependencies

Functional Requirements

Req'd AUV Equip vol
Mass
AM vol
AM Mass

Ports; Area

Space; used
Mass

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

Total Envelop (Wet + Dry Housing)

Platform interface

Control

Space,
Mass

G3 ESP Design Dependencies

Functional Requirements

Req'd AUV Equip vol
Mass

Ports; Area

Ports; Area

Space; used
Mass

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

Total Envelop (Wet + Dry Housing)

Platform interface

Control

G3 ESP Design Dependencies

Functional Requirements

Req'd AUV Equip vol
Mass

Sequester

Isolation

Filter (Analysis)

Filter Pumping

Lyse, Sample purification

Reagent Storage

Reagent Dosing

Transfer to Analytic Module

Filter (Archive)

Archive Preservation

Archive Storage

Repeat (Reuse, Clean, Exchange, Duplicate)

Pressure Housing

Total Envelop (Wet + Dry Housing)

Platform interface

Control

Space,
Mass

G3 ESP Design Dependencies

Functional Requirements

Sequester
Isolation
Filter (Analysis)
Filter Pumping
Lyse, Sample purification
Reagent Storage
Reagent Dosing
Transfer to Analytic Module
Filter (Archive)
Archive Preservation
Archive Storage
Repeat (Reuse, Clean, Exchange, Duplicate)
Pressure Housing ←
Total Envelop (Wet + Dry Housing) ←
Platform interface
Control

```
graph LR; S[Space, Mass] --> PH[Pressure Housing]; S --> TE[Total Envelop (Wet + Dry Housing)]; C[Control] --- V[Varies widely, specific to equipment selection];
```

Varies widely,
specific to equipment selection