Process Intensification Feasibility Pathway

Turn your process intensification hypothesis into evidence

When developing new biologics, time and capital are precious. Whether you're exploring perfusion, continuous processing, or ways to reduce cost and footprint, you need clear, data-backed answers fast.
CPI's Process Intensification Feasibility pathway helps you test hypotheses and make confident decisions in just 3 months. It's a focused, high-impact programme that combines CPI's technical expertise, state of the art facilities, and advanced flow sheet modelling to deliver rapid, actionable insight to inform the intensification of your mAb production process.

Designed for bioprocessing innovators who need to move fast

This pathway is ideal for companies that:

- Need to test a new process concept or technology before committing to full development.
- Are under pressure from investors or leadership to de-risk decisions quickly.
- Want to compare process options, such as high-productivity perfusion or continuous capture, without major capital outlay.
- Are looking for independent, vendor-neutral validation of intensification benefits.

You'll work directly with CPI's bioprocessing experts to scope your challenge, run targeted studies, and interpret results.

What you'll get

- **Data-driven clarity:** Validate your hypothesis using high-throughput, pilot-scale experimentation.
- **Quantified impact:** Understand potential COGS, footprint, and sustainability improvements through techno-economic and life-cycle analyses.
- **Next-step confidence:** Receive a clear, evidence-backed recommendation and scale-up pathway that strengthens funding applications and de-risks investment decisions.
- **Cost efficiency:** Access CPI's advanced equipment and facilities - proving your concept while preserving cash for the next stage.

Why CPI?

As an independent technology innovation centre, we offer flexible support without tying you to a specific cell line or platform, which gives you the freedom to choose the best route to commercial deployment. You retain full control of your IP, gain access to cutting-edge infrastructure, and benefit from CPI's experience in developing end-to-end intensified biomanufacturing systems.

A staged approach

We recommend approaching this as a staged pathway. Begin with a complimentary one-hour diagnostic workshop to understand your current process challenges and objectives. From there, we propose a choice of customisable approaches designed to guide you through the development process while giving you the data you need at an early stage to make feasibility decisions.

The pathway comprises:

1. **Feasibility Sprint (one month)**
   To give you outline process parameters required to meet your economic specifications. Bioprocess modelling based on your existing data. This can rapidly give you information and comparisons to allow you to assess the pros and cons of intensification.

2. **Integration Pathway (10 weeks)**
   Where you have a cell line and some initial data from fed-batch experiments. Small scale perfusion trials in Ambr250P will identify the experimental space for further investigation. Backed by bioprocess modelling to predict process performance at large scale.

3. **Advanced Development**
   A tailored program of work designed to develop your process. Including optimisation of perfusion using DoE approach on Ambr250P, transfer to lab scale perfusion vessel to confirm and refine process parameters and work up to end-to-end run on CPI's test bed continuous biomanufacturing system to give you 'in real life' results. Process modelling will predict performance at larger scale and confirm assumptions made earlier in the development process.

Move from question to confidence

Don’t let uncertainty slow your innovation. In just a few months, CPI can help you validate your process intensification opportunity, de-risk your next investment to and accelerate your route to market.

Get in touch, contact Asif.Tulah@uk-cpi.com