

Five Considerations for Repurposing Existing Buildings into Novel Therapy Manufacturing Facilities

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IS YOUR BUILDING VIABLE FOR NOVEL THERAPY MANUFACTURING?

Novel therapies are transforming the treatment of diseases such as cancer, neurological disorders, and various genetically inherited conditions. The production of cell and gene therapies, mRNA vaccines, and anti-sense oligonucleotides are critical for patients in need - emphasizing why speed to market is critical for novel therapy manufacturing.

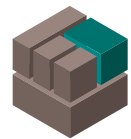
With that in mind, many companies look to repurpose existing facilities as a cost-effective, highly flexible solution suitable for the manufacture of clinical and commercial materials. At DPS, we are often asked to weigh in on the viability of converting an existing facility to a novel therapy facility.

Here are five points of consideration when deciding if you can repurpose your existing facility:

1

Building Geometry

A short and wide building is more manageable to repurpose than a tall and narrow building. The flow of people, materials, and equipment is more efficient on a single floor than between two or more floors. Further, the need for utility shafts, elevators, and stairs reduces available floor space.



2

Clear Height

The building's clear height (or usable height) to which there are no obstructions is an important factor when determining feasibility. A typical ATMP manufacturing building section includes the cleanroom's height plus the height above the cleanroom for ductwork, piping, lab gasses, fire water, cable tray, etc. These systems need to be designed and constructed so that the components are accessible and maintainable. Having a higher clear height helps to accomplish this goal.



3

Site Utilities

A building initially designed for manufacturing will have greater site utility infrastructure than a building designed for office use. The typical site utilities needed to support novel therapy manufacturing include power, natural gas, domestic water, sewer, and data/fiber. Understanding the utilities needed to support the building program and the necessary improvements in terms of cost and schedule typically weigh heavily in deciding if a building is a good candidate for repurposing.



4

Structural Considerations

The manufacturing of novel therapies typically requires roof-mounted equipment, including air handlers, fans, and condensing units. There are also other structural loads on the roof structure's underside, including piping, ductwork, and walkable ceiling systems for modular cleanrooms. The roof structure, building columns, and column footings all need to support these loads. Further, the column bay spacing is also an important consideration where the larger column bays provide more flexibility than a smaller column bay size.



5

Loading Docks And Utility Yards

For the building to function correctly, there needs to be a means to get raw materials into the facility and product and waste out. The number and operation of loading docks is often an overlooked factor.

Further, there may be equipment located on grade outside of the building in a utility yard including chillers, towers, bulk gasses, emergency generators, etc. It is essential to consider if a yard is needed, how large it needs to be, and how to keep it secure.



SHOULD YOU REPURPOSE YOUR EXISTING FACILITY?

Considering the above will help inform if an existing building is a worthwhile option to repurpose for novel therapy manufacturing.