



Rapid responses to the impacts of COVID-19

Helping clients globally to prepare, respond and recover

Scaling up healthcare capacity at speed: Adapting existing facilities

We can adapt existing healthcare facilities, whether in construction or complete, to enable the care needed for our clients and the community. We also understand the requirements and challenges in demobilising temporary solutions to meet future demand.

Rapid conversion or augmentation:

From

- Operating theatres
- Non-critical wards
- Outpatient facilities
- Ambulatory surgical care
- In-construction projects
- Parking structures or garages

To

- Additional ICUs
- Isolation units
- Lower acuity beds
- Entire wards
- Temporary quarantine facilities
- Drive-through assessment and testing

Advantages:

- Existing clinical environment
- Established;
 - infrastructure
 - workforce
 - logistics
 - SOPs
 - clinical standards

Challenges:

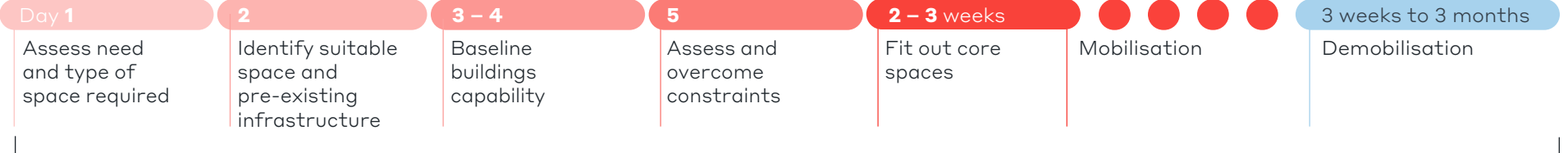
- Continuity of business whilst converting
- Finding suitable estate
- Limited available space
- Supply chain lead time

ABOUT WSP

Dedicated to serving communities locally, nationally and internationally, WSP provides a full spectrum of engineering consultancy services, leveraging a global network of professionals to respond to challenges and crises wherever our clients need us to.

wsp.com/healthcare

Rapid response: Inception to operationalisation



Assess equipment need and procurement early. We have the capability to help our clients engage suppliers, industry partners and ensure successful delivery.

Critical paths

Acute focus on priorities

Take stock of every available asset and capability

Identify suitable space:

Review space utilisation

With elective surgeries being suspended, which spaces can be quickly converted? For example Pre-op, PACU, Exam rooms.

Assess locations

Can we exploit existing and adjacent infrastructure such as medical gases?

Identify the type of care required

Make the most of your existing negative pressure rooms. Do all patients need to be in an Airborne Infection Isolation (AII) environment?

Develop a robust clinical model

What patient pathways need review and what is the impact on space?

Ensure records of pre-Covid state

Have you audited and recorded any modifications? You will need to return the spaces to normal.

Create an emergency prepared future

Could the temporary changes be adapted to enable a permanent switch of use with minimum effort?

Our healthcare clients include

Healthcare providers

- Australia, Department of Health
- Germany, Landesanstalt für Gesundheit (LGL)
- Canada: Provincial Healthcare Authorities
- Hong Kong Hospital Authority (HKHA)
- New Zealand Ministry of Health
- Singapore, Ministry of Health
- South Africa, National Department of Health

- Sweden: Vastra Goaland Regionen, Region Skane, Region Uppsala
- UK, National Health Service (NHS)

Private providers

- Ascension
- HCA
- Shattuck
- UHS

Our expertise

We offer rapid response project management and engineering services and are able to mobilise and deliver within days.

Our

- professionals provide facility assessments, site adaptation design, commissioning, quality assurance and project management.
- experts provide rapid prototyping design solutions that ensure facilities protect workers and patients in a healthcare environment.
- research has enabled us to develop options for ventilated headboards and our experience includes Respiratory Intensive Care Units (RCIUs).

We are

- Healthcare advisors
- Clinical planners
- Mechanical and electrical engineers
- Structural engineers
- Sustainability consultants
- Decontamination advisors
- Project and programme managers
- Retired military officers experienced in contingency operations
- Security consultants
- Occupational Health and Hygienists'
- Technology consultants

Through our long-established healthcare network we have a wealth of global expertise we can apply to your local challenges.

Contact us to find out where we can help

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Contact our experts

Expediting hospital construction projects

OU Medical Center Oklahoma City

Our team is working towards a temporary fit-out of two patient floors with ICU beds currently in mid construction. We are converting these floors into full negative pressure wings with HEPA filters and monitored pressurisation. The owner has targeted a 60-day completion. We are the general contractor and are providing building inspection services.

Kings College Critical Care Unit, UK

As part of an ongoing project our team have been working on the provision of two new floors of Critical Care Units (CCU). As the new CCU sits directly over the theatre block, the project also involves replacing all the theatre plant while the theatres remain in operation. We directly employed the commissioning specialists directly and, working continuously with a variety of the Trust's regular subcontractors we completed the fire stopping, commissioned the fire alarm cause & effect and established the pressure cascade. The CCU is now in operation in emergency mode, doubling capacity through the provision of 60 much needed CCU beds.

Unity Health, St Michael's Hospital Toronto, Canada

Our teams have been involved in the early partial opening of Peter Gilgan Patient Tower. This will provide critical single patient rooms, designed with infection control measures to meet the current need for critical care units.

Henri-Mondor University Hospital Créteil, France

As part of the project team we are proud to have contributed to the partial, early opening of the “resuscitation - blocks - interventional RBi” building creating 85 ICU bed capacity.

Adapting existing facilities

Dell Seton Medical Center at The University of Texas, Austin, US

The two towers at this facility operate at 100% outside air and are fully exhausted to improve patient well-being and the healing experience.

WSP have advised on the isolation contingency plan for the operating rooms when needing to treat an infectious patient during this time.

Shattuck Re-occupancy (BMC Newton Pavilion), US

To address a potentially large number of homeless COVID-19 patients, the city of Boston, in conjunction with the State of Massachusetts, decided to convert the unoccupied building, currently being renovated, into COVID-19 treatment space for approximately 300 patients.

We provided mechanical and electrical engineering support to reactivate the building systems controls and balancing of the existing systems to ensure the intent of the M/E narrative is met. Working with architects SLAM and general contractor Gilbane this project was completed in 21 days.

Mask Production Facility Hong Kong

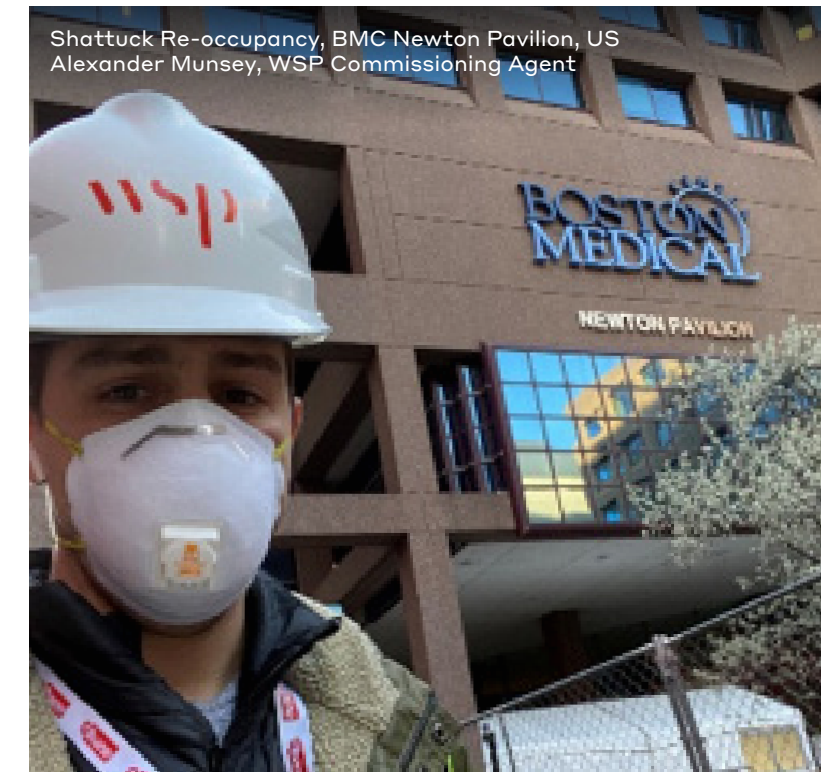
We are appointed as MEP and clean room design consultant to retrofit, within two months, an existing warehouse in Tsuen Wan into a mask production facility. The 540 sq.m space will house three production lines and packing areas within a clean room environment built to Class 100K.

Municipal Hospital Munich Harlaching, Germany

We have supported our client in a fast track two day programme to fix and install equipment to create additional ICU capacity.

Kings College Hospital NHS Trust, UK

Through our long-term involvement with this site and its Estates team we are engaged to provide design and consultancy support for the extension of the piped oxygen service into two wards that have now been adapted to cater for critical care patients. The temporary installation was designed and installed in two weeks to increase the number of critical care beds by 54.



Shattuck Re-occupancy, BMC Newton Pavilion, US
Alexander Munsey, WSP Commissioning Agent