Changing building typologies forum – Observations from practice

Choice, change, connection: A new generation of learning and working environments

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With shifting expectations and rapidly changing technologies, the digital revolution poses significant challenges to the relevance of workplaces and university buildings. Failing to correctly anticipate future needs risks rendering these typologies redundant. Foster + Partners has been working with Yale School of Management and Comcast to design world-class spaces that address these challenges. Our investigations point to a consensus that digital communication isn’t replacing face-to-face interaction; in adopting both, we are simply more connected than ever before. By harnessing the capacity of good design to connect and bring people together, we are creating a new generation of workplaces and learning environments, which both maximise and moderate communication.

Edward P. Evans Hall, Yale School of Management

There is a palpable sense of history as you wander through Yale, one of the oldest universities in the States. Yet Edward P. Evans Hall, home to Yale School of Management, is the site of an education revolution: radically reconsidering connections between students, the dynamic between tutor and student, and the relationship between the university and wider world.

The Yale MBA prepares graduates for the realities of being a leader in today’s connected world. This means making sense of a deluge of information and responding to developments as they happen. Foster + Partners was commissioned to design a building which supports this fast-changing landscape. Our multidisciplinary design team started by understanding the needs of faculty and students, with a range of interviews, workshops and through observation. This set the foundations for a collaborative design process, involving regular sessions with Yale. Almost from the outset it was clear that the demands of the pioneering integrated curriculum necessitated a redesign of the classrooms. The new models support a diverse range of teaching styles, break down barriers and effectively accommodate digital technologies.

In their former classrooms, staff and students at Yale School of Management felt limited. Workshops highlighted configuration constraints and the poor integration of technology. The orthogonal set up, with its enforced tutor-student interface, heightened unwanted hierarchies and strained peer-to-peer engagement. It was increasingly apparent that the space met neither the specific needs of the Yale curriculum, nor the expectations and demands of the business world.

As a result of a fascinating design process, five new classroom models were developed. Each of the new classrooms is circular, contained within double-height drums arranged around the central courtyard. Tailored to Yale’s curriculum, the teaching spaces can support every style of learning, from team-based working to lectures, discussions ‘in the round’ and video conferencing.

The ‘in the round’ classroom is a debating chamber for around 40 people. The new space embraces digital technologies, while promoting the benefits of face-to-face exchanges. Crescent benches converge to form a circle of students and tutors, affording all occupants more or less equal prominence. In terms of spatial democracy, it’s a change from the orthogonal set up and the hier-

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archy between tutor and student. Since Yale has also introduced two tutors per class – stationed at opposite edges of the circle – there is a sense that there is no front or back within the space.

A debating chamber needs a level of ‘buzz’. Similarly to an amphitheatre, the wide sightlines help to create an atmosphere and encourage the free exchange of ideas. While bringing people close together boosts energy levels, personal space is also important. The design team therefore experimented with different spatial configurations, producing full-scale mock-ups to allow both faculty and students to experience the space. Based on this feedback, we were able to adjust dimensions several times to achieve the right balance.

Simply adding more and more digital technology into the space can hinder effective communication. At Yale, the aim was to enhance not detract from
the core function of the space as a place of debate and discussion. The desks are designed with this in mind – there is plenty of space for personal devices. Screens circle the room, meaning that users can view colleagues and displays almost simultaneously (without either taking precedence).

With state-of-the-art video conferencing comfortably accommodated in this way, virtual and actual realities are merged. Yale can communicate to the wider world and vice-versa: industry leaders in remote locations can engage with students based on site. Breaking news can easily be streamed in to the classroom to challenge lesson plans: making this ‘real-time’ education.

Comcast Innovation and Technology Center (CITC)
Global media and technology company, Comcast Corporation, has similarly ambitious demands for its workplace. Comcast’s Innovation and Technology Center in Philadelphia will be home to the technologists, engineers and software architects instrumental to the organisation’s continued success as they create new products and services at a pace faster than ever before. The principal design challenge is making the city’s tallest tower a hub of innovation and a point of connection, for its workforce and Philadelphia. The fundamental question for the design team: how can the workplace evolve to meet these needs?

Findings from the user workshops and questionnaires suggest that supporting a culture of collaboration is central to the solution. Traditionally, organisations with a strong R&D focus are drawn to low-rise buildings in suburban locations, which offer ease of collaboration across expansive, flexible floors. City centre towers have enormous benefits, yet they rarely offer the same ease of connection. To do this, we have to make the building work a lot harder – not just horizontally, but vertically too.

The interior of CITC is fluid and dynamic, designed to allow staff great freedom in choosing where and how they work. The floor plate maximises flexibility, as it is able to support project-based working in a constantly evolving environment. Raised floors (a rarity in the US) allow for inexpensive, relatively hassle-free internal reconfigurations. An offset core and minimal columns create transparent, ‘loft-like’ expanses filled with daylight – each office level hosts around 200 people; equivalent in scale to 12 tennis courts.

Today’s worker is highly mobile: with phone, tablet or laptop, we can connect from a multitude of locations and we choose to work in a range of environments. Options for informal working (both collaborative and independent) away from the desk are plentiful and there are generous social spaces. Thirteen three-storey sky gardens link directly to all office floors, drawing a continuous strand of
Figure 3:

*Comcast Innovation and Technology Center (CITC).*

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greenery through the building. Active programming means that each sky garden will have a distinct identity, encouraging campus-wide migration.

The five-storey ‘urban room’ at ground level is for the benefit of both Comcast and the city. Conceived as a point of connection with the neighbourhood and its start-up businesses, shops, bars and restaurants, it combines the best elements of a lobby, plaza, shopping and leisure areas with a transit concourse below conveniently connecting the building to public transportation. Surrounding streetscapes are invigorated with highly active edges and strong connections are forged with nearby public plazas: visibility and connectivity are key to avoiding a sense of the ‘corporate fortress’.

Conclusion
Yale and Comcast are very different institutions with similarly complex connection needs: effective communications, both face-to-face and digitally; and successful collaborations, not just internally but with the wider world. Choice (of environment), change (frequently and easily) and connection (in every sense of the word) are crucial in the future of both learning and working environments. Building typologies continually evolve and architects have always designed with future generations in mind. Yet the way we connect is changing so much, so fast that organisations that aren’t architecturally nimble face the risk of being left behind.

Figure 4:
Comcast Innovation and Technology Center (CITC).
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