

Architecture, engineering striving for better efficiency

What sort of growth and/or expansion do you foresee in the architecture and/or engineering professions when the economy finally begins a solid turnaround?



Thomas Jaeger, president, Kideney Architects, Amherst:

With increased confidence in the economy, architects and engineers will likely see changes to provide services in three main areas:

- Deferred maintenance

for facilities owned by entities requiring public referenda for capital improvement projects, such as suburban schools. Improved public support as the result of increased confidence will enable districts to address overdue maintenance issues.

- Expansion and renovation of existing hospitals and schools will alleviate pent-up space needs.

This could include facilities renovations as hospitals are encouraged to consolidate by the Berger Commission.

- Restoration of old, historic structures will rise as the governor's tax credit bill will energize the development community and encourage their renovation.

Although it appears the bulk of the stimulus package will go toward infrastructure rather than facilities, capital improvement projects will increase as public faith in the economy rises.



Matthew Meier, partner architect, Hamilton Houston Lowrie, Buffalo:

Once the predictability of the financial industry has leveled and owners become more confident in it, architects and engineers will be challenged to develop designs that are economically feasible, relatively fast to build, and efficient to operate. Adaptively reusing existing buildings is a responsible and effective method to be green and this will likely continue to be a significant mode of future development.

New technologies such as Building Information Modeling (BIM) will enable architects and engineers to better plan and predict the construction and operation of new or renovated buildings.

They will need to retrain staff in this technology as owners and developers become more aware and expectant of this information.

A quality BIM project should reduce construction changes and costs, and enable the owner to more efficiently operate and maintain the facility, reducing his costs. Design professionals in the future economy will need to be more aware of the financial and environmental implications of a project.



Anthony Mussachio, Mussachio Architects, Williamsville:

I believe the majority of growth in engineering will be in the public sector where the TARP money has already become available.

TARP-triggered public works projects such as roads and other infrastructure improvements are already under way.

Hopefully, to benefit architects, public housing and elderly care facilities will not be far behind, allowing working-class taxpayers to benefit from the handouts. That would be bolstered if health care reform is implemented.

If and when banks start loaning money again, private ventures can develop with the majority of the work in renovation and remodeling of existing structures. First, because it is less risky, but as important, renovation and remodeling represent the "greenest" architecture, and sustainability is a real priority for the professions. With "green" popularity both disciplines will undoubtedly need new and retrained LEED-certified professionals, as well as those trained in BIM (building information and modeling) software.



Kevin Neumaier, president & CEO, Ecology & Environment, Lancaster:

Luckily Ecology & Environment hasn't experienced a decline as a result of the economic downturn.

A couple weeks ago the company was featured at Number 50 on the Fortune Small Businesses' Top 100 fastest growing companies in America.

There is a new green economy emerging and we expect that those disciplines that will help design that new green economy will have the greatest expansion. We are growing quickly in wind, solar, and other renewable energy, and the electrical transmission to deliver the electricity.

We expect energy efficiency and other forms of environmental engineering to continue to grow.

We look forward to the economic turnaround and helping to design the new green economy.



Harvey Stenger Jr., dean, University at Buffalo School of Engineering and Applied Sciences:

In general I believe the demand for engineers will remain broad and consistent in all fields and industries.

The economic recovery will probably start with growth in technology companies – electrical engineering and computer science – followed by energy needs – chemical engineering – durable goods such as cars and appliances (mechanical engineering).

Infrastructure spending will be important for civil engineers and should stay strong with the ARRA programs. While the biomedical engineering field has been the strongest growth field, a bit of uncertainty in health-related device margins – BME and chemical engineering – may slow them down.

Dale English is a freelance writer.



TEXT BITES

Compiled by Dale English