Construction Sector

The construction sector uses more natural resources than any other sector in Scotland, consuming about half of all resources used annually. Construction and demolition activities are also responsible for nearly half of all Scotland's waste annually.

By working towards a more sustainable construction sector, through responsible consumption and circular thinking we can create new and exciting jobs in offsite construction, closed loop cycling of building materials, digitisation of buildings and material mapping.

Construction Sector

Circular Jobs

What do circular jobs look like in the construction sector?

“Urban miners to scout and identify materials and components to be recovered.”

“Deconstruction auditors will use appropriate deconstruction methods to maximise the quality of recovered materials.”

“Demolition labourers will have knowledge of secondary materials and components to prevent material contamination and minimise damage to recovered materials.”

These jobs will use waste as a resource, sustaining and preserving what is already there through closed loop cycling of building materials.

Construction Sector

Enabling Circular Jobs

What kind of jobs will enable the circular economy and support circular jobs in the construction sector?

"Building information managers to maintain data on construction components so as to keep track of the material assets."

"Architects will work in new ways to promote the reuse of materials and disassembly of buildings through their designs."

"Digital construction managers to create 3D models to reduce on site waste through clash detection and timeline construction videos to support end of life."

Many of these jobs will incorporate digital technology and the skills associated with tracking and mapping materials. This will inform decisions about design, maintenance, repair and reuse and deconstruction of the buildings.

Source: Circular Jobs in Scotland: Inhouse Employment Methodology. (Zero Waste Scotland)

Construction Sector

Enabling Circular Jobs

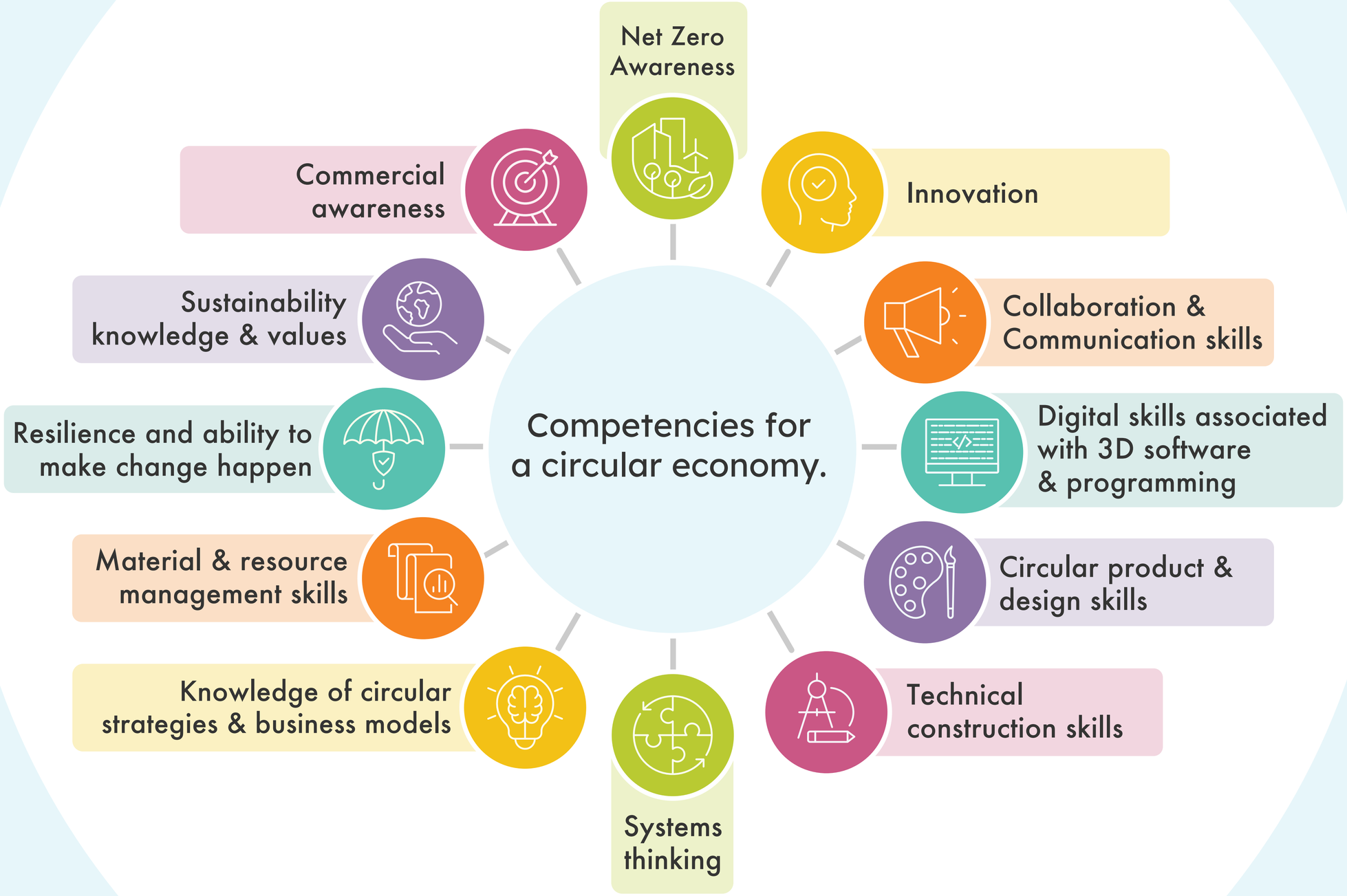
What kind of jobs will raise awareness of the circular economy and support circular jobs in the construction sector?

"Urban planners will ensure all development plans take account for and support the infrastructure for collection of secondary materials."

"Procurement specialists to ensure contractors factor in sufficient lead in time for the sourcing of secondary materials."

"Sales and marketing professionals to encourage and support the switch from primary to secondary materials."

These jobs will raise awareness of using secondary materials, support the infrastructure for collection of materials, and ensure where possible materials are diverted from landfill.


Competencies for a circular economy.
Net Zero Awareness
Innovation
Collaboration & Communication skills
Digital skills associated with 3D software & programming
Circular product & design skills
Technical construction skills
Systems thinking
Knowledge of circular strategies & business models
Material & resource management skills
Resilience and ability to make change happen
Sustainability knowledge & values
Commercial awareness

Case Study

Kenoteq

KENOTEQ®

An innovative manufacturing company leading in the recycling of construction waste to produce the K-BRIQ, the world's first sustainable brick.

Skills: Digital skills, construction expertise, demolition, and manufacturing, innovation.

Roles: Chief Scientific Officer, Product Development Engineers, Site Technicians, Production Manager, Research and Development, Material Innovation Specialist.

Examples: Site Technicians: Trained machine operators and brick layers applying innovative techniques to reusing and repurposing secondary materials for construction. Knowledge of construction waste for handling and sorting of secondary materials.

Product Development Engineers: Environmental and materials engineering working in the research and development team for on going innovation of the K-Briq as well as new product pipeline and technical support for production.

Chief Executive Officer: Background in structural engineering and architectural design, with commercial training and development from the Royal Academy of Engineers.

> "New recruits need to firmly believe that the future of construction can be sustainable and want to contribute towards this working towards a goal, to have a low environmental impact with everything we use (materials, processes) is key to Kenoteq. The mindset is not even comparable to more linear companies."

Case Study

Robertson

Robertson's purpose is "to assure a sustainable future."

Skills: Technical expertise, visualisation software skills, teamwork and collaboration, communication, solution focused, change catalyst.

Roles: Digital Construction Manager: With a software design background or onsite construction knowledge the use of 3D visualisation software automatically checks for material wastage through clash detection and provides solutions before on-site construction. 3D design improves resource efficiency and minimises on site waste material.

Waste Champion: This role enables targeted intervention to reuse or reduce waste through data collection. Adding value to waste by benchmarking cost, seeking circular solutions to waste material, and adding social value through community engagement.

> "It is everyone's responsibility to embed sustainable thinking in their role. The ability to drive change through persuasive communication and collaboration is key to the sector to ensure successful transition to Net Zero."

Director of Sustainability and Social Impact