

Innovation Alliance for the West Midlands

Sustainable Construction, Infrastructure and Innovation Workshop

Notes from workshop discussions, 13 February 2018

Attendees

Name	Organisation
Noel Street (Chair)	3DReid and Chair of CIC West Midlands Committee
Matt Cooper	Arup
Lisa Hamilton	Birmingham City Council
Monica Mateo Garcia	Birmingham City University
Matthew Wisdom	Bouygues UK
Steve Green	Bouygues UK
John O'Brien	bre
Mike Leonard	Building Alliance
Debbie Ward	Clugston
Paul Chatwin	Cundall
Mike Woollacott	Greenwatt Technology
Mark Fenton	High Speed Two Ltd
Alan Carr	Innovation Alliance for the West Midlands / Sustainability West Midlands
Pam Waddell	Innovation Alliance for the West Midlands
David Hardman	Innovation Birmingham
Natalie Cropp	Midland Metro Alliance
Will Butcher	Mott MacDonald
Azhar Quaiyoom	Q Sustain Ltd
Gareth Evans	Sustainability West Midlands
Susan Hone-Brookes	The Manufacturing Technology Centre

Workshop 1: Local examples of existing innovation in sustainable construction and infrastructure

- [Infrastructure Industry Innovation Platform](#) (I3P): a platform that allows organisations in infrastructure to collaborate to deliver infrastructure for the future, administered by the Knowledge Transfer Network. It encourages innovation across both infrastructure clients and their supply chains and there is opportunity for others in the sector to get involved.
- Supply chain: Midland Metro Alliance has embraced collaboration to break down the barriers to innovation through running innovation forums and allowing organisations in their supply chain to try new products and allow for failure. Working with the whole supply chain is key.
- Demand-led local energy solutions: Railway stations are increasingly using battery storage due to their high electricity loads and linking these with clean technologies e.g. CHP.
- Bouygues and Innovation Birmingham are working together to develop a Smart Cities Challenge and accelerator as part of the [Serendip Incubator](#).
- [Bre](#) has worked with several organisations to pilot and implement several projects pertaining innovation; see accompanying slides for more details on their recent activity.

Workshop 2: Barriers and gateways to innovation in the sustainable construction and infrastructure sector

Barriers	Gateways
<p>There is currently a lack of collaboration in the industry to address umbrella industry targets, such as a 50% reduction in CO₂ by 2025.</p>	<ul style="list-style-type: none"> Shared targets encourage collaboration and this workshop and subsequent activity can help to bring forward a joint approach to achieving these targets and other activities, e.g. sharing offsite solutions.
<p>There is a fragmented approach to offsite solutions and few opportunities to collaborate on developing these.</p>	<ul style="list-style-type: none"> The IBP is an existing platform that other organisations can get involved in. Could a Skunkworks or Serendip incubator type special vehicle/approach be set up to encourage working together to develop a marketable product?
<p>There is uncertainty around who uses data and how much knowledge the user (client or citizen) has of data and how it can help them. Data is also underpinning other sectors (e.g. transport) but not the construction industry due to many builders only meeting necessary requirements – what would the platform be to change this?</p>	<ul style="list-style-type: none"> Innovation Alliance can connect the construction industry with these other sectors to engender learning, as well as relevant university research. Opportunity to visit the Serendip Smart City Incubator at Innovation Birmingham, which provides market access and expertise for digital start-ups through close partnerships with major organisations, accelerating the early growth of new business. This will be facilitated by the Innovation Alliance and offered to workshop attendees (see action 1 at the end of these notes).
<p>Lack of recognition nationally of the value of the construction industry and a restriction in public funding access and opportunities due to their models and requirements.</p>	<ul style="list-style-type: none"> Government is beginning to recognise the sector’s value through papers such as their IPA Annual Report, the Industrial Strategy and Clean Growth Strategy. The fallout from the Grenfell Tower disaster, such as the Dame Judith Hackett review and the collapse of Carillion may also lead to positive changes to the industry as a whole and a recognition of its importance. Launch of Housing Infrastructure Fund.
<p>Encouraging innovation in supply chains can be a challenge. There is also a lack of collaboration in the delivery chain and partnership frameworks make this hard to change and a lack of awareness of existing tools.</p>	<ul style="list-style-type: none"> Working with supply chains from the start to the end of a project means organisations, including SMEs, are more likely to innovate and encourages collaboration to happen throughout the lifetime of the project; Midlands Metro Alliance is already doing this through their innovation forum and supply chain events. Tools exist to help connect large organisations and their supply chains e.g. the Supply Chain Sustainability School and these could be promoted through Innovation Alliance channels and events. The Innovation Alliance is in discussion with partners about a cross-sector proposal to roll out a model of supply chain innovation developed by the Midlands Aerospace Alliance (MAA). This is at an early enough stage to add a construction strand of activity.
<p>Engaging with local SMEs inside or outside of the existing supply chain is difficult; there is a lack of understanding in terms of</p>	<ul style="list-style-type: none"> See above with respect to MMA and MAA work. See above for opportunity to visit the Serendip Incubator. WMCA is trying to link local support with infrastructure to improve awareness.

Barriers	Gateways
how SMEs can help large organisations.	<ul style="list-style-type: none"> SWM runs a Green Business Clubs Network which provides access to 1000s of SMEs across the West Midlands. There are several events a year aimed at bringing SMEs together at which larger construction companies could exhibit, e.g. Venturefest WM and SME Live.
Public sector procurement is clumsy and its processes do not support innovation	<ul style="list-style-type: none"> Accessing the various Innovation Alliance and SWM networks could pave the way to encouraging key changes to processes. Public Procurement is likely to be a discussion topic at an Innovation Alliance WM Innovation Policy and Practice Event, which may lead to cross-sector collaborative action.
The perception of the industry is now out of date and is preventing the development of appropriate skills (e.g. digital) to encourage more innovation. Is construction even the right phrase to use, given the industry also focuses on function and design etc.?	<ul style="list-style-type: none"> Opportunity to make the industry more dynamic through various gateways outlined above. Universities have the opportunity to translate their research and knowledge, of which there is plenty on innovation in construction, directly into the sector with better collaboration between institutions and the industry. There is a Construction and Skills group being convened by the WMCA which is looking at needs and how digital modelling can be used.
There are various threats to the industry long-term...	...so can it be ascertained via collaboration how innovation could help to address these?

Potential projects to explore, further work and support required

Quick wins for sustainable construction companies:

- All present agreed that contact details could be shared to follow up bilaterally.
- [Share with us](#) your case studies on innovation for wider promotion.
- Become a member of the [Innovative Low Carbon Working Group](#) (ILCWG) for collaboration opportunities within and between sectors and attend future meetings ([15 March](#) (a waiting list is in operation as the meeting is now full) and 7 June PM). [Contact us](#) for more details and to become a member.
- Peruse the various relevant links included in these notes, including the [WM Science and Innovation Audit](#) which outlines in detail the reasons why sustainable construction is considered a particular market strength in the region.
- The Innovation Alliance Executive team will add workshop attendees to our main database so that you are included in invites to future Policy and Practice events and Venturefest WM.
- Get in touch if you would like to visit the Serendip Incubator to learn about working with start-ups to solve challenges and we will organise a tour / discussion.
- [Become a SWM member](#), giving you a platform to engage with [multiple sectors](#) and organisations committed to sustainability, promote your services, case studies and job opportunities, first priority to exhibit at our events and a free place at our flagship [Annual Conference](#).

Further work and potential projects to explore with Innovation Alliance WM:

- The Innovation Alliance Executive will pull together attendees from the workshop who would like to visit the [Serendip Smart City Incubator](#) at Innovation Birmingham, which provides market access and expertise for digital start-ups through close partnerships with major organisations, accelerating the early growth of new business. Get in touch with [Alan Carr](#) if you'd like to attend.
- The Alliance Executive will engage with workshop attendees to explore other groups and networks already operating that attract attendance from the sustainable construction sector.

3. We will then pick out where there is any focus on innovation in these groups with a view to then potentially running a specific workshop to support collaboration around particular innovation activities.
4. The Alliance Executive will facilitate a discussion with Innovation Birmingham to determine whether there is the potential for the [Innovation Engine](#) initiative to be used by the sustainable construction sector in order to open up opportunities to engage with other organisations (such as universities) to provide solutions to identified challenges.
5. We will explore how data can be used in sustainable construction projects and connect these to the [Consortium for the Demonstration of Intelligent Systems](#) initiative.
6. Potential construction industry involvement in a cross-sector proposal to roll out a model of supply chain innovation developed by the Midlands Aerospace Alliance; this is currently under active discussion by the Innovation Alliance.
7. Potential construction industry involvement in a discussion/activity around public procurement as a driver for innovation; this is currently under active discussion by the Innovation Alliance.

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