

Catalytic Infrastructure

Are our interventions multiplying economic impacts?

30 June 2016

1. Introduction

Catalytic infrastructure has, by definition, the power to radically activate development, and transform parts of the built environment. The city of Portland on the US west coast, defines catalyst projects as:

“Public or private projects that are planned and designed to cause a corresponding and complementary development reaction on surrounding properties. They are projects of sufficient magnitude to stimulate redevelopment of underdeveloped properties or major rehabilitation of underutilized buildings. The identification and implementation of catalyst projects provides an opportunity for public and private investments to receive a reasonable return. The measure of return on investment can include jobs creation, increase in land value, improved transportation and access, and new housing units.”

The Infrastructure Dialogues are hosted jointly by the [Development Bank of Southern Africa](#), the [South African Cities Network](#), the [National Business Initiative](#), the [Performance Monitoring and Evaluation Department in the Presidency](#), and the [Department of Economic Development](#), with the [Engineering News](#) as media partner.

The goal of the forum is to use shared information, and facilitated discussion, to achieve an improved climate for policy and decision-making, strengthened cooperation within the infrastructure sector, and specifically, to generate ideas that participants may be able to take forward or apply, through their respective areas of responsibility and influence.

At the 39th Infrastructure Dialogue, what initially began as a dialogue, discussing definitions of what qualified as a catalytic project, ended in a conversation, which pointed towards a determination to be optimistic, to personally play a part in being champions of development. Participants agreed that theory alone will not take our developmental needs forward. What is required is action, and a belief in ourselves as a nation, in order to realign mindsets, in order for these projects to be successful.

2. Programme and Panellists

Peter Magni of the South African Cities Network welcomed the audience to the 39th Infrastructure Dialogue, and invited everyone to participate freely by way of debate, sharing opinions and providing feedback. He emphasised that the session forms a platform where government, the private sector, and

civil society, engage on the subject of infrastructure. **Richard Goode** of the Development Bank of Southern Africa (DBSA), facilitated the Dialogue, after introducing the following panel members:

Mr. Alex Potgieter	<i>Chairman Regional Board, Johannesburg Chamber of Commerce and Industry</i>
Mr. Douglas Cohen	<i>Executive Manager: Planning and Strategy - Johannesburg Development Agency</i>
Mr. Faried Manuel	<i>Manager Metros/Water/ Education, Development Bank of Southern Africa</i>

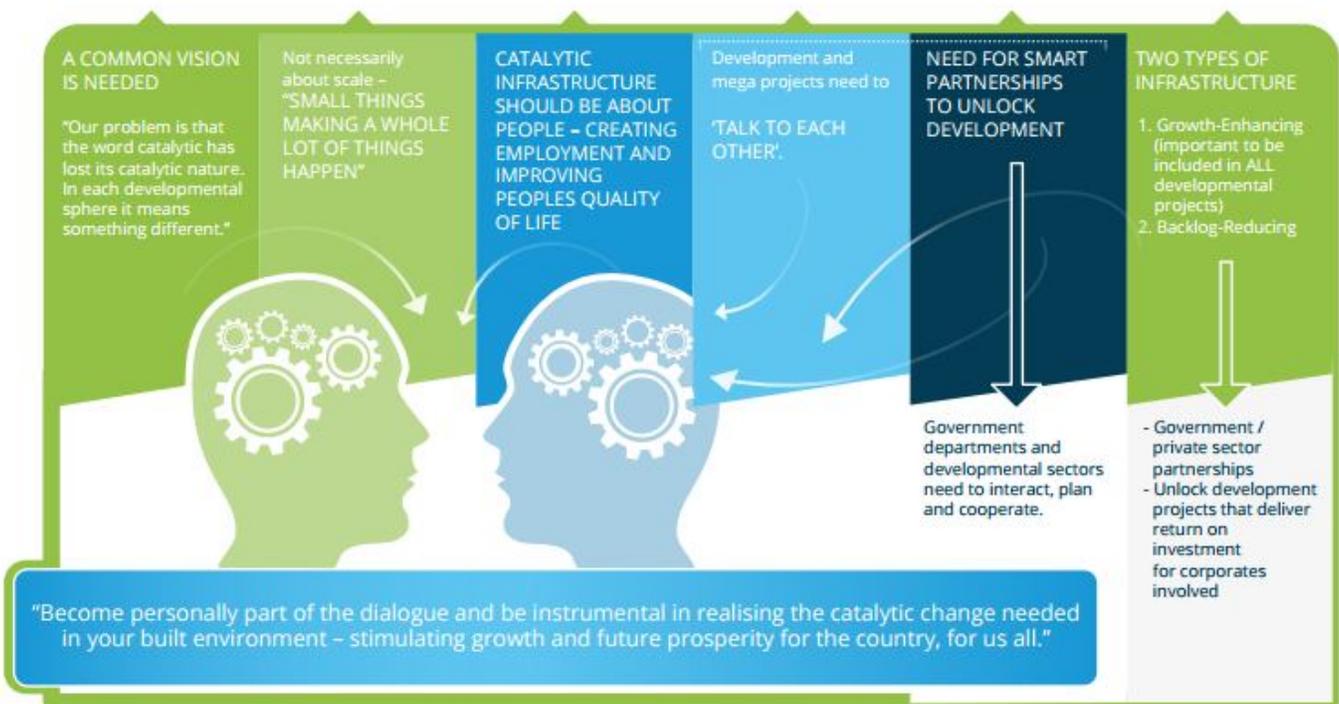
CATALYTIC INFRASTRUCTURE DEFINED

Catalytic Infrastructure activates further infrastructure development in a radical way that transforms the built environment.

Public and/or private projects planned and designed with the added purpose to cause a corresponding and complementary development reaction on surrounding infrastructure which may include the redevelopment of underdeveloped

properties or major rehabilitation of underutilized buildings. Catalytic Infrastructure, from small to large scale projects, provides the opportunity to deliver a reasonable return on investment which includes job creation, increase in land value, improved transportation and access as well as new housing infrastructure.

(Ref: City of Portland, US Catalytic Infrastructure Definition)



UNLOCK CATALYTIC POWER

- Focus on catalytic places and catalytic spaces.
- Planning needs take place well in advance.
- Sustainability is important.
- A driven and experienced project champion is critical.
- Focus on the people element - being customer-orientated.
- Government Development Plans and priorities need to be communicated.
- Integrative planning.
- Infrastructure maintenance.
- Address SA's regulatory framework and promote economic growth.

CATALYTIC CHANGE - PROJECT LESSONS TO BE LEARNT

- Gautrain
- Bus Rapid Transport
- Corridors of Freedom
- JCCI's Property Incubator
- Energy Renewables Projects

AREAS REQUIRING CATALYTIC CHANGE

- Energy
- ICT - broadband projects
- Water
- Transportation

3. Critical observations

3.1 Grappling with catalytic development theory

The following synopsis formed a theoretical starting point for participants in this Infrastructure Dialogue:

Over the last few years, as government grappled with the problem of low growth, the term ‘catalytic infrastructure investments,’ has become more prominent in relation to certain infrastructure investments, in cities, and in rural development efforts. These projects have been added to ‘strategic integrated projects,’ and ‘mega projects,’ in our lexicon of infrastructure development, and have become a central plank of government’s economic policy.

Infrastructure investment faces well-known problems, of projects over-promising and under-delivering - what economist refer to as optimism bias. On the other hand, in our chronically-low economic growth situation, it is precisely leadership from public investments, amongst others, that can catalyse the growth we need. Are we getting the multiplying impact from infrastructure investments that we should? What can be done to increase the benefits of such investments? Are we learning as we go along?

“The word catalytic has lost its catalytic nature,” began the first panellist. It means different things in different developmental spheres. The Johannesburg Developmental Agency (JDA), for example, uses infrastructure development as a catalyst for change, and has made significant financial and intangible investments in Braamfontein and Newtown. Its current portfolio includes Corridors of Freedom and the BRT. The organisation does work in Soweto, Diepsloot and Alexandria, with investments at this scale, generally conducted at a neighbourhood and precinct level.

Comparatively, at a National Treasury level catalytic investment specifically refers to third party investment and is “all about what you can leverage, or how you will crowd in other investment.”

“We need open dialogue that asks, ‘What is your vision of South Africa, and where do you see that we can plug it into our programmes?’ We are engaging between sectors but we are not doing enough, so we must ask, how do we streamline and move forward on that.” Alex Potgieter

Multiple voices shared the view that, in both private and public developmental circles, we continue to grapple with the theory and definition of catalytic infrastructure projects. “The diversity of catalytic project definitions has become very clear in this dialogue,” agreed delegates following the plenary discussion. “We started discussing ICT as a specific type of catalytic project, then evolved to it being not necessarily specific projects that would realise the change, but changes to processes in relation to the private sector and local government that would realise the shifts and impacts that we need.”

The notion that catalytic infrastructure could ‘sometimes be a useful concept’ was expressed, yet notes of caution were flagged at most conversation turns. Catalytic projects, it was said, should not be considered purely for the sake of just creating physical infrastructure. “Development is about people. If we want a measure of success for that catalytic infrastructure, it should be about people. Creating employment and improving peoples’ quality of lives.”

There was a general understanding that mega projects and catalytic projects need to ‘talk to each other’ in the IDP environment. Overall, there was consensus that this category of projects needs to have a net social benefit, which extends more broadly than the project’s economic returns. The belief surfaced that such projects need not necessarily be about scale, but rather “about smaller things making a whole lot of things happen.” Two types of infrastructure were cited, namely Growth-Enhancing, and Backlog-Reducing infrastructure, with the former being of a catalytic nature, and therefore, being important to include in development projects.

A BUSINESS VOICE AND VIEW

The Johannesburg Chamber of Commerce and Industry (JCCI), presented an independent view on its mandate to contribute to the development of the South African economy. The projects that it champions are framed within its cluster model, through which the organisation defines how to create Public Private Partnerships, through a seamless and neutral platform. JCCI is in the final stages of developing a Build/Own Transfer methodology for projects, through which Government wants to partner with the private sector. The Growth Point Fund is an example of this approach in action. Working directly with the Office of the Premier and MEC of Economic Development, the JCCI has unlocked development projects, and there are a lot of corporates who are “putting their money back”. The organisation’s Property Incubator, is one example of such investment in action, as it has enabled 144 SMEs to take a developmental journey. The ‘Corridors of Freedom’ were noted as a definite opportunity in the space of catalyst projects.

3.1 Zoning in on funding

With funding being a core enabler of developmental projects, the role of funders, such as the Development Bank of South Africa (DBSA), featured in this Dialogue. “When you straddle the middle you see both sides of the issue, public, and private sector perspectives. You’re in the middle trying to get all of the pieces to work together,” iterated a panellist.

This financial institution is particularly inundated with proposals and suggestions put forward as being catalytic, “most of them good.” Yet most of the projects funded by the DBSA have been unsuccessful in getting off the ground, with one of the reasons being the intensive timespend, required in the conceptualisation stage. Fundamental challenges enter the equation, as these projects tend to require huge effort, to make it work from both a sustainability, and a public perspective.

To counteract such challenges, the DBSA is in search of smart partnerships to unlock specific projects within specific sectors, including Water, ICT, and Transport. Their objective, is to get sectors talking to each other, in order to duplicate successful achievements.

The Energy sector was highlighted as an example of a sector that has achieved a measure of success with the roll-out of renewable project, albeit that this viewpoint was counteracted in the light of crisis having been the catalyst of change therein. Sectors such as ICT, for example broadband projects, were cited as lending themselves to catalytic impact. The DBSA has found that such projects can be added to municipalities. From a funding opportunity perspective, the sector has even been touted as offering a fifth, utility-type income, for municipalities.

It was asked: If the primary concern of the private sector is managing its risk exposure, and if Government has done its bit, what is the role of development banking institutions? Is it to mitigate those risks? It was questioned why a number of instruments provided by the DBSA are similar, or more expensive, than those provided by the commercial banks. The DBSA responded, acknowledging that its funding is not cheap. “We have a credit spread in line with market prices. Our job is to play the de-risk and project development role,” it was noted.

4. Key outcomes to unlock catalytic power

The following considerations emerged through the Dialogue:

“When starting with this catalytic concept, the struggle is to ascertain the outcome you want.” Douglas Cohen

We may need to put aside catalytic projects and talk more about catalytic places and catalytic spaces. The JDA, in particular, operates at this level, in the context of Jo’burg’s spatial strategy. The agency has taken the approach of a strong spatial orientated development, focused on those places and spaces that connect and integrate people.

Catalytic infrastructure projects need to be planned well in advance. There is often a high level of excitement around such projects, but a lack of appropriate skills to enable success. These projects require a well-defined, long-term plan, which, for example in the case of Phase 2 of the Gautrain project, should see the project team getting the universities ready to provide the required skills locally.

An element of sustainability is critical, as is the pre-requisite for a project champion. In the South African context, we need urban management, which is clean, green, and safe. We also need more people to gain the benefit of the ROI. To realise the transformative power of such projects, they need to be championed by someone who is proactive rather than reactive, who through constructive conversations, will defy the odds, and push them through, resulting in proposed projects becoming real developments. Strong leadership, strong monitoring and evaluation, and the inclusion of the communities in which these projects are happening are critical factors for success.

“What we actually need is densification, because we need more people to get the return on this investment, and then obviously, to make it, you know, really catalytic, we need an integrated, diverse, multi-typology, mixed-use, perfect environment.” Douglas Cohen

The missing link, is the customer-orientated outcome, in other words, the people element. Government focuses on the highest order outcome, which is primarily an economic outcome. From a skills perspective, we need to cluster people around higher order outcomes. The political will, and the need to engage with people who want to take risk, are two critical considerations. A delegate commented, “We need an openness to new ideas, and packaging of these, in South Africa. Can you grow project champions in an institutional set up? I believe so. We need to give people the space to bring together like-minded people and see what grows out of that.”

There is no *clearing house* for perceptions, in terms of what the national priorities are. South Africa has many developmental plans, but no priorities are communicated through them, resulting in an inherent lack of clear strategic requirements. “I’m not sure we know what we want at a strategic level,” said one delegate. While there is talk of the private sector wanting to be involved, where is the forum where those conversations can take place? Government ministers need to state upfront what is needed from the private sector, and bring these entities into the programmes at an earlier stage.

Integration into planning, including in the spatial planning dimension. “If you don’t start right, you will be on the wrong road and it will get you nowhere,” said a participant. Define the goal and the challenge right up front, and involve the right parties from the start in order to achieve success. The need for standardisation within the municipal arena, was also raised, with the view being that the private sector needs to be involved earlier in the process, and that agreement should be reached on risk-sharing between sectors.

Risk of disinvested people if infrastructure is built and not maintained. The BRT is an example of a project that faces such risk. In this regard, the comment was made that the private sector holds potential investment, but will not be willing to allocate it towards zero-maintenance public sector projects. The private sector, in particular, is strongly focused on economic ROI, and infrastructure with the potential to fall into disrepair, represents an unwarranted risk to such investment.

A need to address South Africa’s regulatory framework to promote economic growth. “Some years back we were talking of Asian tigers. None of those had a regulatory framework like we have. Our regulatory framework will never promote economic growth. The country’s high interest rate and inflation will never promote growth. Mall building will never promote growth. There is no sustainability in the current landscape,” voiced a delegate.

5. Conclusion

While time was spent on trying to pin down how a catalytic project should be defined within the South African context, and delegates might have struggled to find meaningful local examples of successful

catalytic projects, a framework for what is required for such a project to happen, has certainly begun to take shape.

What is clear is that there is a depth of knowledge, experience, resources and infrastructure that sits in South Africa, and now is the time to pull together, be positive and support each other through the challenging course ahead. One delegate voiced it strongly, inspiring a change of mood in the session. What began as a theoretical starting point turned to encouragement and a determination to take conversations forward in a way that leads to realisation of these projects:

“There are very exciting things happening in the environment in which I work. Where one person sees opportunity such as affordable housing, densifying, or new affordable private schools... people are economic agents and they will act. We mustn’t second guess them. We must facilitate them and be positive with what we are trying to do. We have a legacy to leave and that legacy has to leave its own legacy. Find your own catalytic projects in your personal and professional life and be optimistic about it.”

Richard Goode concluded the 39th Infrastructure Dialogue, thanking the participants and indicating that the conversations had completely reworked his thinking about catalytic infrastructure projects. He encouraged participants to give thought to the next meeting to be held on the 15th September 2016, which will focus on the topic of opportunities within the water sector, and asked them to come armed with good ideas for this industry.

“We need to think of the large projects – those will be the ones for big multipliers, big impact. But considering too that small scale can make a valuable contribution.”

Richard Goode

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Speaker Biographies

Douglas Cohen

Douglas is Executive Manager: Planning and Strategy - Johannesburg Development Agency. His formal qualifications include: Architecture (BaS – Wits), Project Management (Unisa), Business Administration (MBA– GIBS), Economics and Public Finance (Unisa) and Property Investment (Wits). Currently completing a Masters in Urban Studies. Douglas public service experience in 2005 as a project consultant in the City of Joburg's economic development unit or EDU. From there he moved to SALGA National Office in Pretoria, and prior to joining the JDA Douglas worked in Neighbourhood Development Partnership Grant (NDPG) at National Treasury.

Faried Manuel

Faried is the Manager for Metros, Water and Education at the Development Bank of Southern Africa. Faried holds a few degrees in Economics and Econometrics, has worked in the banking and finance environment for more than 20 years and has plied his trade in both the public and private sector banking space. He has structured finance in sectors as diverse as property, infrastructure and aero-planes.

Alex Potgieter

Alex is a member partner of the Johannesburg Chamber of Commerce and Industry (JCCI) and the JCCI Sandton Regional Board Member Chairman. He is an Advanced Communications Specialist, Business Development Strategist and Deal Originator that has taken on an Advocacy/Ambassador role in many corporates and NGO organizations in support of their respective objectives. He is also the President of the South African Business Development Institute. He studied through the South African Air Force and qualified as an Aeronautical Engineer along with additional core subject's taken in the field of Marketing.

Richard Goode

Richard is an Infrastructure Research Specialist at the Development Bank of Southern Africa. He has a MA from the University of Cape Town. At the DBSA he is engaged in research on integrated infrastructure planning to improve the capacity for and execution of durable, economic, efficient and long term infrastructure provision and knowledge management of the results thereof. Richard is animated by problems of growth, inequality and innovation. He has worked in applied economics in a wide range of sectors.

Peter Magni

Peter is a Researcher with South African City Network focused on urban land, spatial planning and land use management and public infrastructure. He has over ten years' experience in local and national government. He was previously responsible for coordinating the capital budget at the City of Johannesburg.

INFRASTRUCTURE *Dialogues*

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Dialogue in Pictures



Picture Above: 39th Infrastructure Dialogue Panellists during Roundtable Discussions

From left to right: Faried Manuel (Executive Manager: Planning and Strategy - Johannesburg Development Agency), Richard Goode (DBSA), Alex Potgieter (Chairman Regional Board, Johannesburg Chamber of Commerce and Industry), and Douglas Cohen (Executive Manager: Planning and Strategy - Johannesburg Development Agency)



Picture Above: 39th Infrastructure Dialogue Facilitator and Speakers

From left to right: Douglas Cohen (Executive Manager: Planning and Strategy – Johannesburg Development Agency), Faried Manuel (Executive Manager: Planning and Strategy – Johannesburg Development Agency), Alex Potgieter (Chairman Regional Board, Johannesburg Chamber of Commerce and Industry), and Richard Goode (Development Bank of Southern Africa)