



International Federation of Consulting Engineers FIDIC



GeoBim Summit

Dr Nelson Ogunshakin CEng, FICE, FREng, OBE

FIDIC Chief Executive Officer

4-5 May 2023





FIDIC member associations and associates

4 regional groups

93 members

Representing 40,000 firms

spanning 5 continents

1.2 million engineering professionals

Albania
Albanian Association of Consulting Engineers - aace.al

Australia
Consult Australia
consultaustralia.com.au

Austria
Austrian Consultants Association ACA
aca.co.at

Bahrain
Bahrain Society of Engineers
mchands.org

Bangladesh
Bangladesh Association of Consulting Engineers - bacenetd.org

Belgium
Organisation des Bureaux d'Ingenieurs-Consuls, d'Ingeniere et de Consultance - ori.be

Bosnia and Herzegovina
Association of Consulting Engineers of Bosnia and Herzegovina - uk.ba

Botswana
Association of Consulting Engineers Botswana - aceb.org.bw

Brazil
Associação Brasileira de Consultores de Engenharia - abocconsultoria.org.br

Bulgaria
Bulgarian Association of Consulting Engineers and Architects
baeca-tg.org/

Canada
Association of Consulting Engineering Companies, Canada - acec.ca

China
China National Association of Engineering Consultants
cnasec.org.cn

China, Hong Kong
Association of Consulting Engineers of Hong Kong, China - acehk.org.hk

China, Taiwan
Chinese Association of Engineering Consultants
caec.org.tw

Colombia
Comité Colombiano de la Infraestructura (CCI)
infraestructura.org.co

Costa Rica
Comisión de Consultores en Arquitectura e Ingeniería
camarcosmofuturoes.org
Colegio Federado de Ingenieros y de Arquitectos de Costa Rica
cifa.or.cr

Croatia
Association of Consulting Companies in Construction
sintsa.raddolovo@structura.hr

Cyprus
Cyprus Association of Civil Engineers (CYACE)
scoimk.org

Czech Republic
Czech Association of Consulting Engineer - caec.cz

Côte d'Ivoire
Chambre Nationale des Ingenieurs Conseils et Experts du Génie Civil
chanciv.org

Denmark
Røgningsrådgiverne Ingeniører
rti.dk

Egypt
Egyptian Consulting Engineering Association
ecea@ecea.net.eg

Finland
Finnish Association of Consulting Firms
siocky.fi

France
CNCI/CNCC/INTEC-Ingenierie - cnci.fr
syntec-ingenierie.fr

Georgia
Georgian Association of Consulting Engineers - gaec.ge

Germany
Verband Beratender Ingenieure
vbi.de

Ghana
Ghana Consulting Engineers Association
gcea.org.gh

Greece
Hellenic Association of Consulting Firms - haecm.gr

Hungary
Association of Hungarian Consulting Engineers and Architects - hmec.org

Iceland
Félisög Ráðgjafaráskráðingja
frv.is

India
Consulting Engineers Association of India - cea.org.in

Indonesia
Indonesian National Association of Consultants
innci.com.id

Ireland
Association of Consulting Engineers of Ireland - acei.ie

Islamic Republic of Iran
Iranian Society of Consulting Engineers
iscea.org

Israel
Israel Organization of Consulting Engineers and Architects - iocea.org.il

Italy
INARSI/NOICE
inarad.it/boice.it

Japan
Engineering and Consulting Firms Association, Japan
ecta.or.jp

Jordan
Jordan Architects and Consulting Engineers Council - jaec.org.jo

Kazakhstan
Kazakhstan National Association of Professional Engineers and Consultants - knasec.kz

Kenya
Association of Consulting Engineers of Kenya - acek.co.ke

Latvia
Latvian Association of Consulting Engineers - laec.lv

Lebanon
Lebanese Association of Consulting Engineers and Architects - laec.org.lb

Lithuania
Lithuanian Association of Consulting Companies - lacct.lt

Luxembourg
Ordre des Architectes et des Ingenieurs-consultants, d'Ingenierie et de Consultance - oai.lu

Malaysia
Association of Consulting Engineers Malaysia - acem.com.my

Maldives
Riyun Private Limited
riyunc.com.mv

Mali
Ordre Ingenieurs Conseils Du Mali (OICM) - oicm.ml

Mauritius
Association of Consulting Engineers, Mauritius
scoaim.vvyaassconsulting@orange.mu

Mexico
Comité Nacional de Empresas de Consultoría de México - cncem.org.mx

Moldova
Association of Consulting Engineers in Republic of Moldova (ARMC)
armc.md

Mongolia
Mongolian Road Association - mra.mn

Morocco
Fédération Marocaine du Conseil et de l'Ingénierie - fmci.ma

Mozambique
Associação de Empresas Moçambicanas de Consultoria (AEMC)
aemc.org.mz

Nepal
Society of Consulting Architectural and Engineering Firms, Nepal
scaefn.org.np

Netherlands
Ningeneurs - ningeneurs.nl

New Zealand
The Association of Consulting and Engineering (New Zealand Incorporated)
aceni.org.nz

Nigeria
Association for Consulting Engineering in Nigeria - acein.org.ng

Norway
Rådgiverne Ingeniørers Forening
rif.no

Pakistan
Association of Consulting Engineers Pakistan - acep.org.pk

Palestinian Territory, Occupied
Engineers Association - paleing.org

Peru
Asociación Peruana de Consultoría (APC) - apccperu.org

Philippines
Association of Consulting Consultants of the Philippines - acccpnl.org

Poland
Stowarzyszenie Inżynierów Doradców i Poinżynierów (SIDR) - sidr.pl

Portugal
Associação Portuguesa de Projectistas e Consultores
apccconsultores.org.pt

Republic of Korea
Korea Engineering and Consulting Association - kencia.org

Romania
Romanian Association of Consulting Engineers (ARCO) - arco.ro

Russian Federation
РАЕО / NACEC
raeo.ru

Saudi Arabia
Saudi Council of Engineers
saudcing.sa

Serbia
Association of Consulting Engineers in Serbia - aceis.rs

Singapore
Association of Consulting Engineers Singapore - acec.org.sg

Slovakia
Slovak Association of Consulting Engineers - saec.sk

Slovenia
National Association of Consulting Engineers of Slovenia - gza.si

South Africa
Consulting Engineers South Africa (CESA) - cesa.co.za

Spain
Asociación española de empresas de Ingeniería, Consultoría y Servicios Tecnológicos (TECHIBERA)
techibera.es

Sri Lanka
Association of Consulting Engineers, Sri Lanka - aceel.org

Sudan
Sudanesse Engineering and Architecture Consultancy Association
senaaminibn@nivechtech-consulting.com

Suriname
Orde van Raadgeverde Ingenieurs in Suriname - sureconfsr.net

Sweden
Innovationsföreningen - The Federation of Swedish Innovation Companies
innovationsforenigen.se

Switzerland
Union Suisse des Ingenieurs-Consuls
usic.ch

Tailand
Consulting Engineers Association of Thailand (CEAT) - ceat.or.th

Trinidad and Tobago
Joint Consultative Council for the Construction Industry - jccci.org.tt

Turkey
Association of Turkish Consulting Engineers and Architects
ttmimo.org.tr

Uganda
Uganda Association of Consulting Engineers - ucea.org.ug

Ukraine
Association of Engineers-Consultants of Ukraine - acecu.org.ua

United Arab Emirates
Society of Engineers - UAE
soee.ae

United Kingdom
Association of Consulting and Engineering - acenet.co.uk

United Republic of Tanzania
Association of Consulting Engineers Tanzania - acect.or.tz

United States of America
American Council of Engineering Companies - acec.org

Uzbekistan
Association of Consulting Engineers of Uzbekistan - aceuz.uz

Vietnam
Vietnam Engineering Consultant Association - vecsa.org.vn

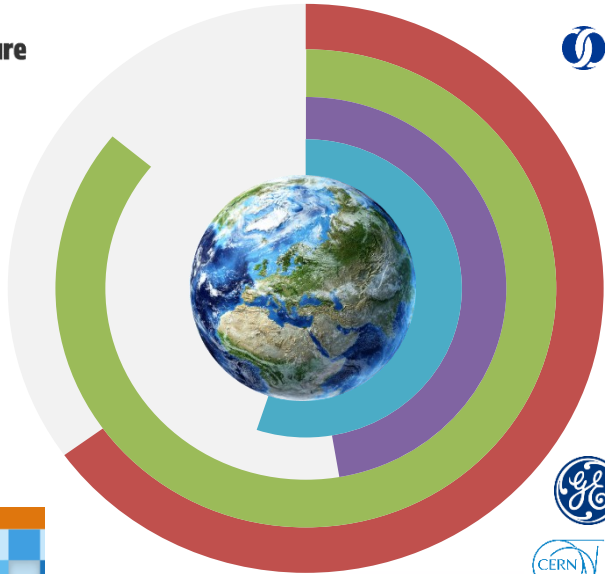
Zambia
Association of Engineers-Consultants of Zambia - acecz.zm

Zimbabwe
Zimbabwe Association of Consulting Engineers - zace.co.zw

FIDIC activities and stakeholders



Bi-lateral bank agreements



MoUs / MoA



Multilateral development banks

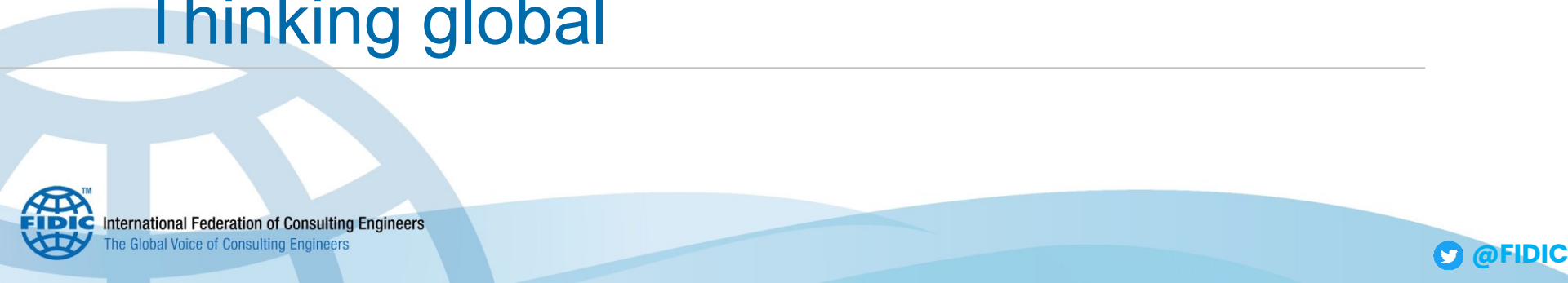


International Federation of Consulting Engineers
The Global Voice of Consulting Engineers



Global drivers, trends and opportunities

Thinking global

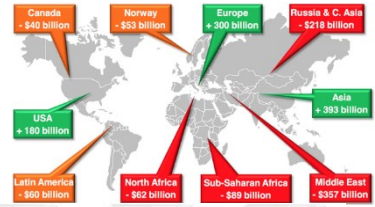


Celebrating

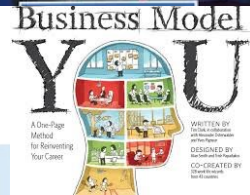


Global drivers

BIG DATA



Covid-19



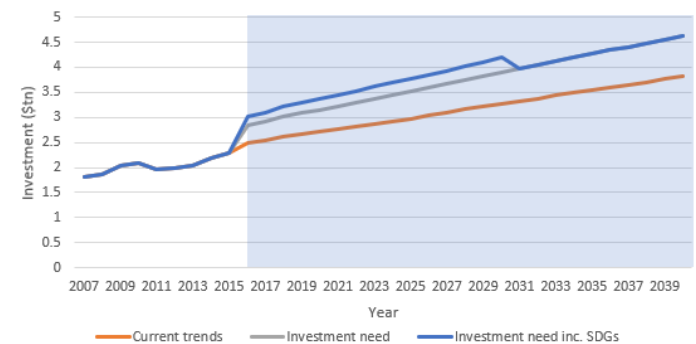
Global construction and opportunities

Global construction and opportunities

Global industry including construction is estimated to be **worth over \$22tn** but studies have found the level of investment in infrastructure **to currently be insufficient**

- The global infrastructure outlook found that global infrastructure investment needs to be **\$94 trillion between 2016 and 2040, which is 19 percent higher** than the current trend
- The world will need to increase the proportion of **GDP it dedicates to infrastructure to 3.5%**, compared to the 3.0%
- The **World Bank since 2000** has invested in over 1700 projects totalling an approximate amount of **\$200bn**. Since 1947 it has invested in **13,622 projects in 174 countries**
- **The IDB has over a \$20bn project pipeline** and has invested in **excess of \$450bn since 1957**

Figure 1 - Infrastructure investment at current need and trend



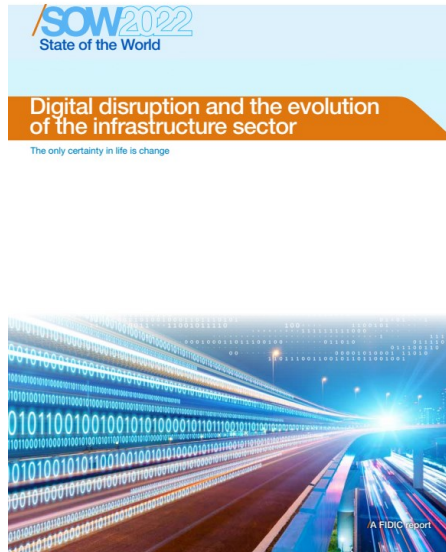
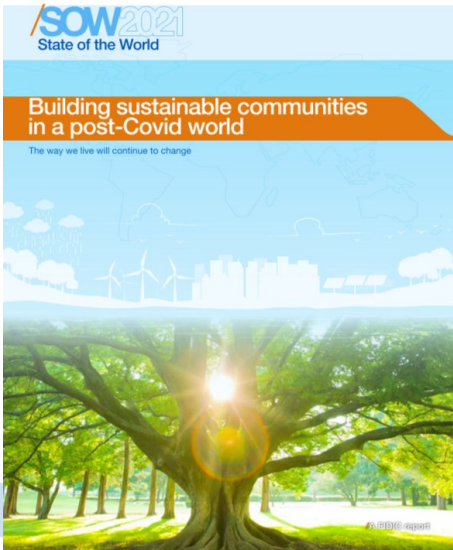
Source: The Global Infrastructure Hub

FIDIC has signed agreements with both the IDB and World Bank and more are planned

15 minute cities...

Digital and sustainable cities?

Digital, sustainable or both?

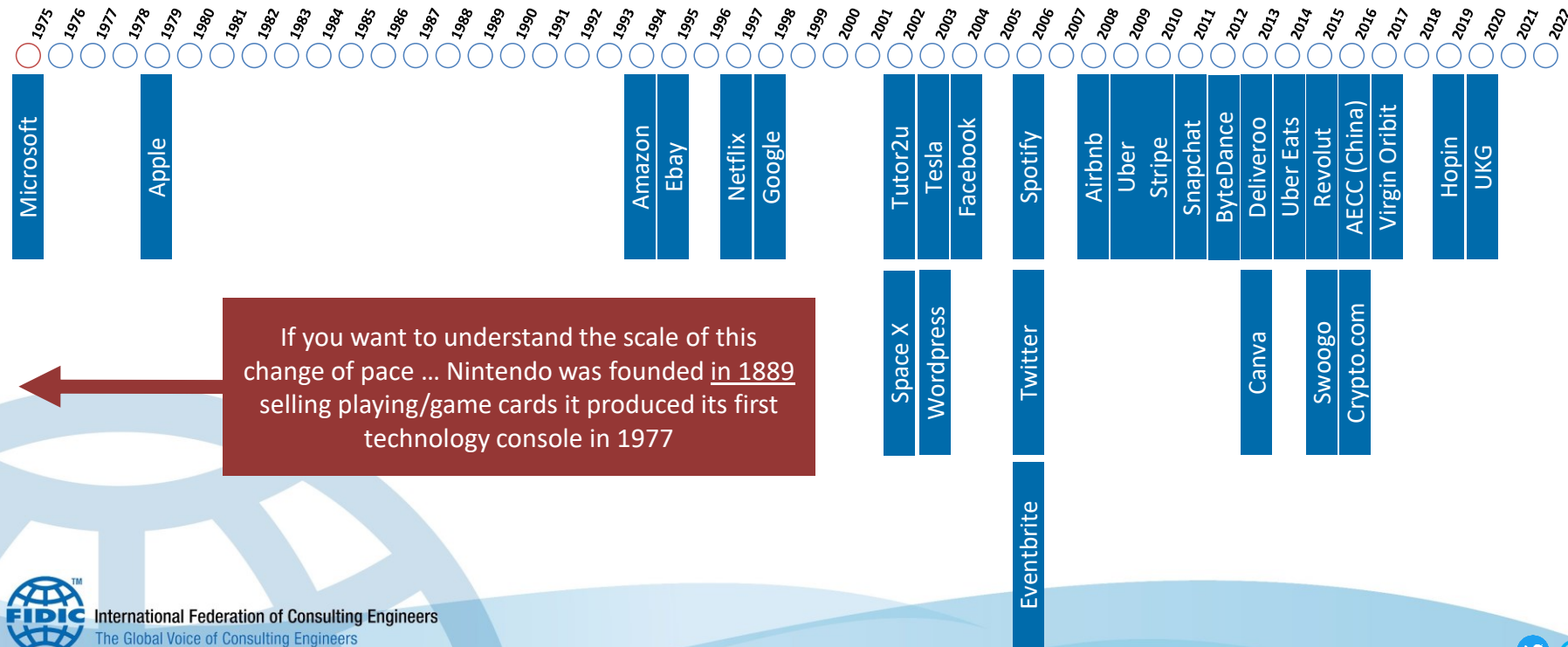


Download report here: <http://bit.ly/3jCk2iA>



The pace of change

Modern tech/apps are related to companies that are popular are less than 20 years old



If you want to understand the scale of this change of pace ... Nintendo was founded in 1889 selling playing/game cards it produced its first technology console in 1977



The sustainable city was



Smart transport



Smart Health



The internet of things



Public safety



Sustainability



Smart offices



Living buildings



Green spaces



Open data



Smart water



Smart energy



Lower pollution



Demand led



Improved drainage



Natural habitats



Minimal waste



Growing population



Dense living



Improved education



Smarter homes



The things to improve the environment



Smart transport



Smart Health



The internet of things



Public safety



Sustainability



Smart offices



Living buildings



Green spaces



Open data



Smart water



Smart energy



Lower pollution



Demand led



Improved drainage



Natural habitats



Minimal waste



Growing population



Dense living

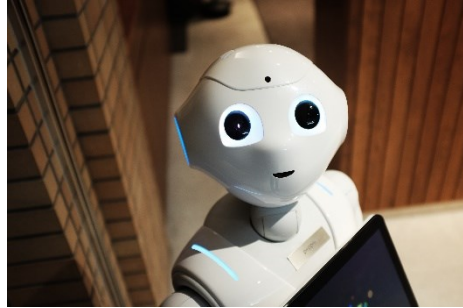


Improved education



Smarter homes

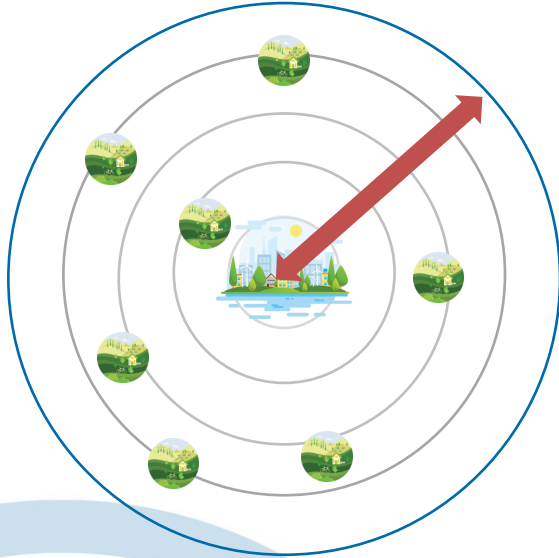
The future is now ...



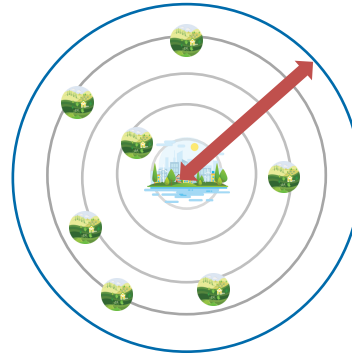
Data monitoring is no longer just central

Monitoring of performance is increasingly becoming consumer led

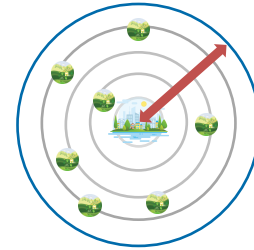
- Smart heating and water controls
- Smart meters
- Smart light switches and sockets
- GPS and phone monitoring
- Smart insurance and vehicle statistics
- Smart speakers
- Smart lighting
- Robot vacuums, floor cleaners, window cleaners, guttering etc
- Online notifications for maintenance activities – insurances, boilers, cars, vacinnes etc



Green space

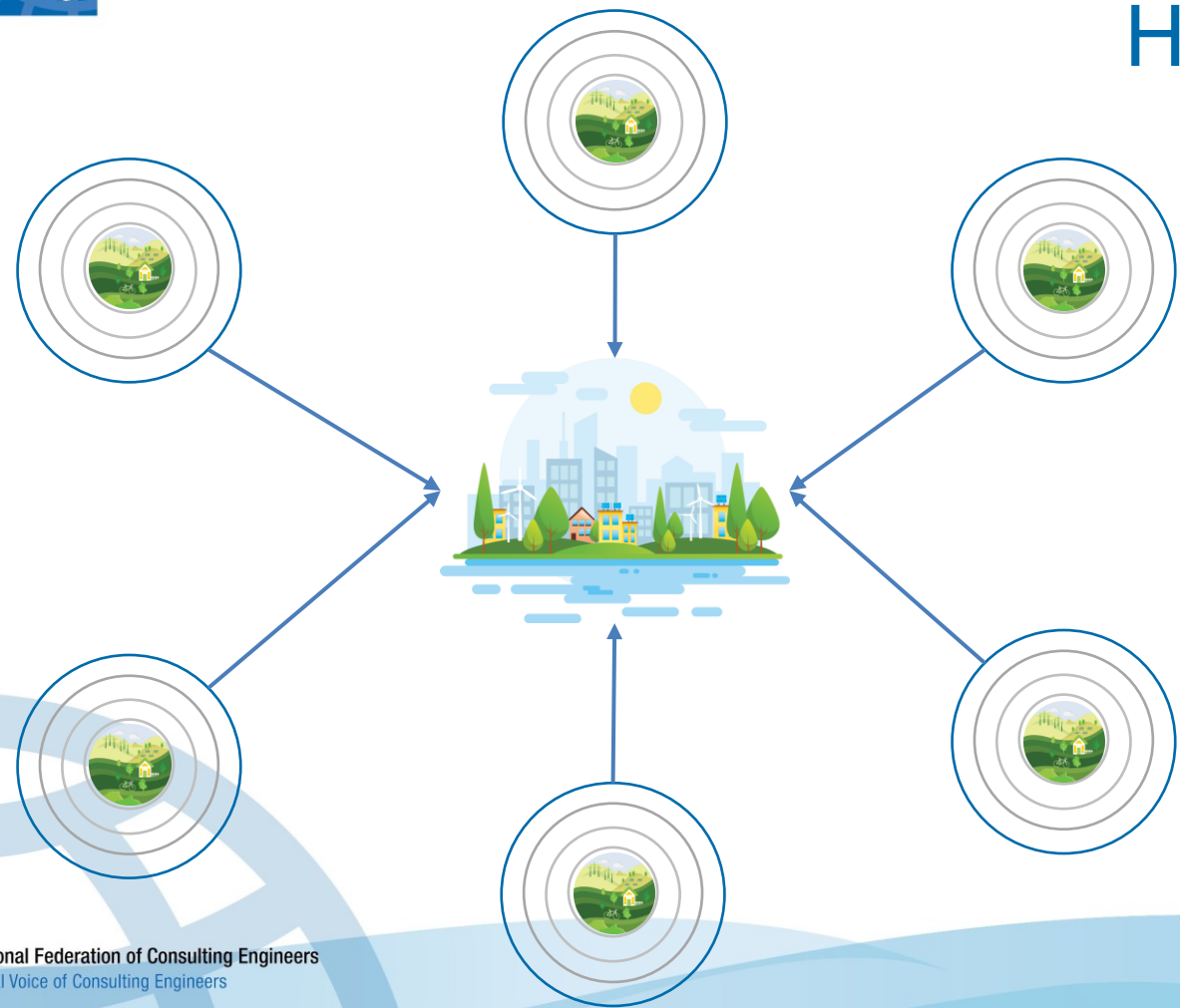


Remote working



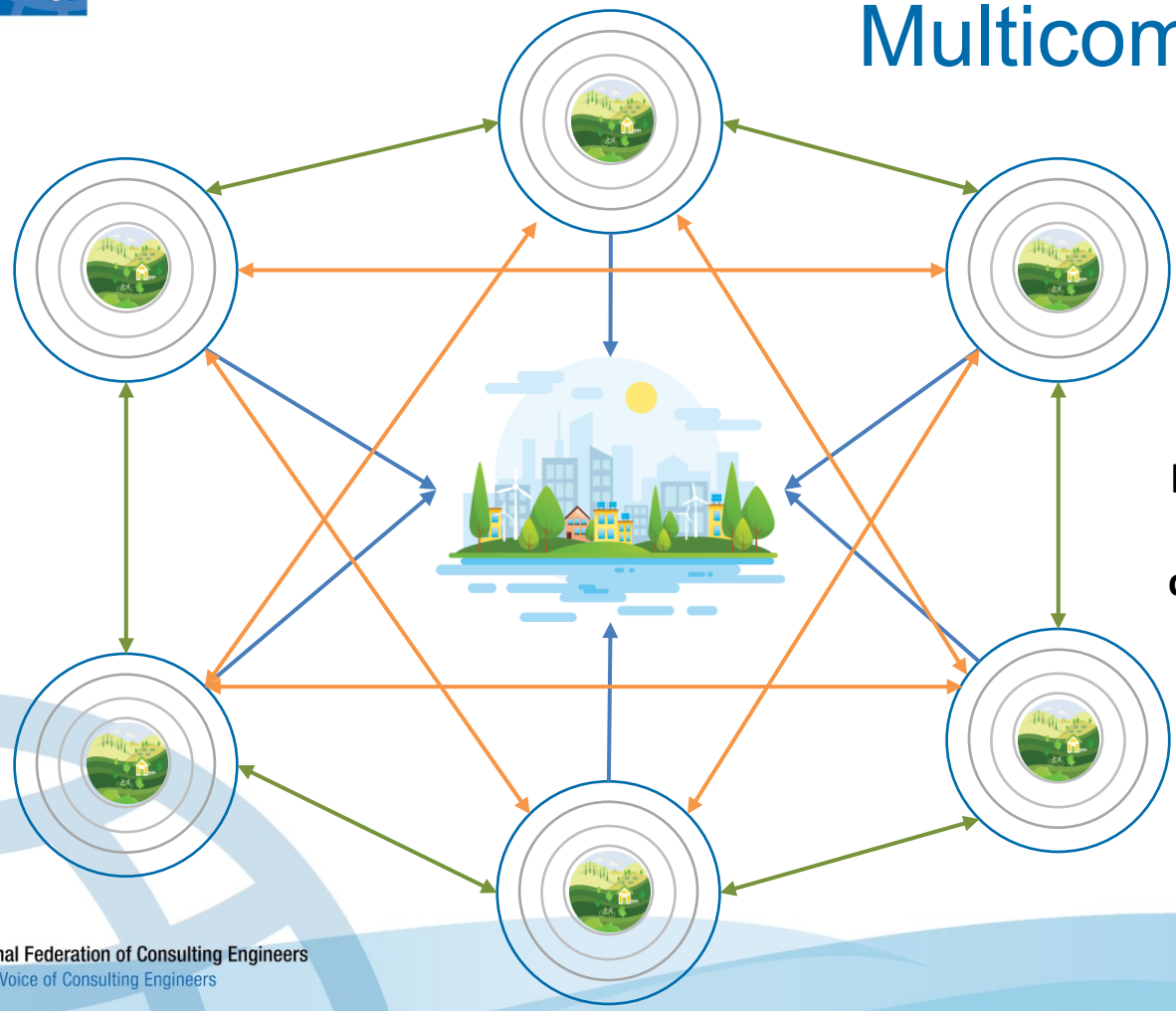
But cities and communities spheres of influence change? It is important to recognise that spheres of influence are different and have changed due to increased remote working

Hub and spoke

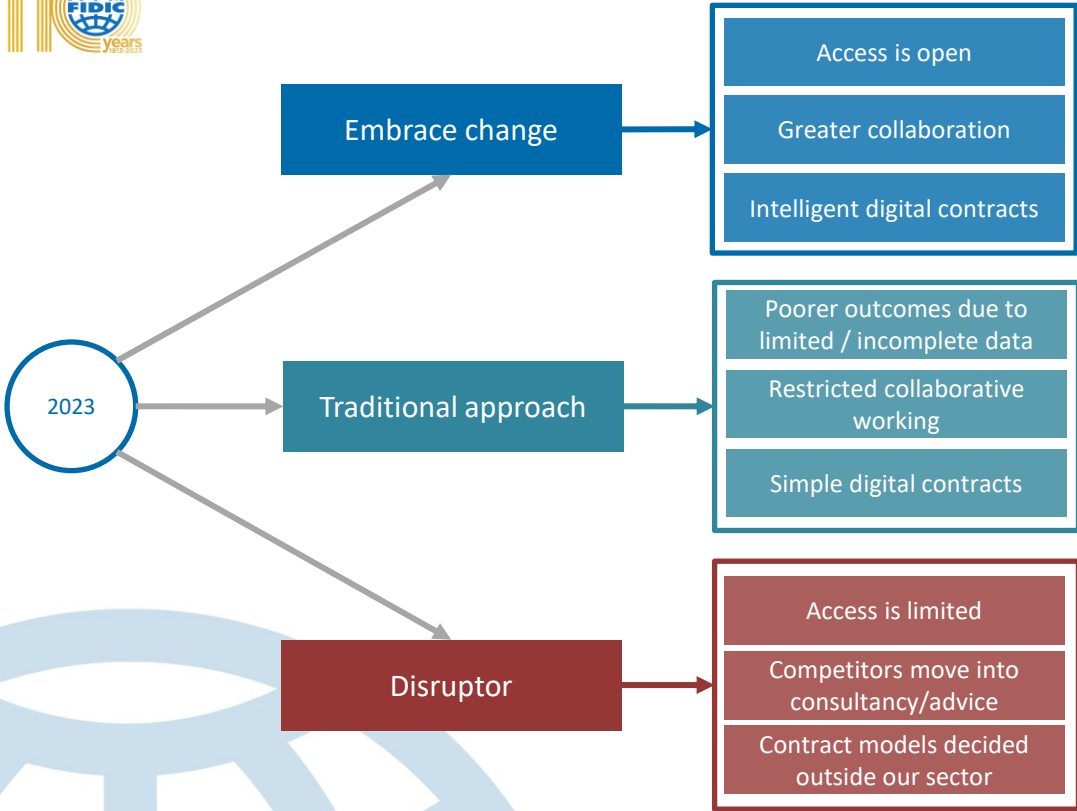


Does the airline hub-spoke model have something to teach sustainable communities and the 15 minute concept?

Multicommunal model



Have we even moved beyond that model without the majority of travel why cant every hub talk to every other hub?



- Improved outcomes due to complete data
- Learn from online collaboration and tools due to Covid
- Engineers act as foundation for contractual relationships
- Operational/maintenance data - continual improvement
- Sustainable infrastructure and design driving factor
- Engineering combines multi sector disciplines

- Data sharing limits learning and best practice
- Collaboration continues but in limited form
- Engineers part of solution but solution type client driven
- Operational/maintenance data fragmented – stepped change
- Most appropriate for client driving factor
- Engineering limited in scope to relevant design function

- Data/preferred solutions no longer driven by engineers
- Collaboration happens with engineers role limited
- Engineers only consulted when design needed
- Operational/maintenance improvement devolved to customer
- External / digital and technological delivery is driver
- Engineering function limited by AI and technology



Global Infrastructure Conference - 2023



September

S	M	T	W	T	F	S
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Raffles City Convention Centre

2 Stamford Rd
178882 Singapore



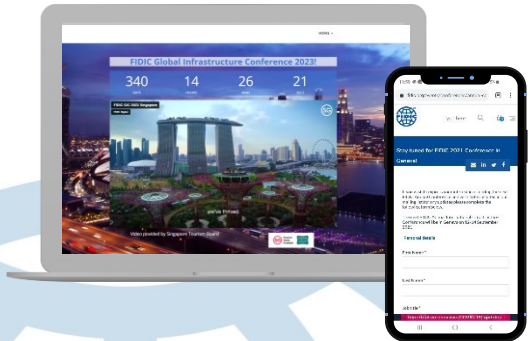
The premier gathering for the FIDIC Contracts community!

Join more than 500 delegates and visitors to discuss:

- How major construction projects are run
- The role of project leadership
- Networking and engagement
- How best to engage with politicians
- International business opportunities



To register: events.fidic.org/FIDICGIC2023





Experts sharing their views and passion ...

Welcome to the Panel



Nelson Ogunshakin

FIDIC, CEO

 Switzerland



Loh Teck Hee

Group Director - Design and Planning Lab,
Urban Redevelopment Authority

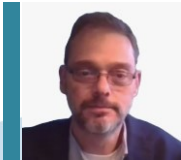
 Singapore



Andres Maremae

Head of GIS, Strategic Management Office, City of
Tallinn

 Estonia



Roland Van Der Heijden

Program manager - Digital City Rotterdam,
Municipality of Rotterdam

 The Netherlands



Questions & Answers



Engage with FIDIC



President



Anthony Barry
Australia

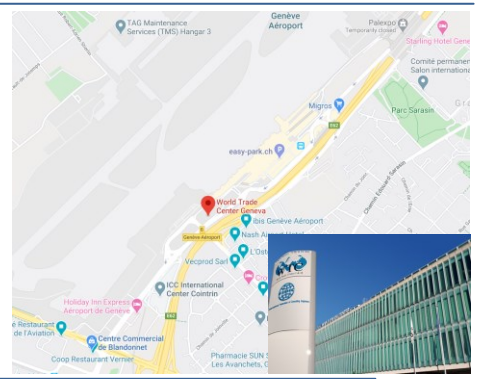
CEO



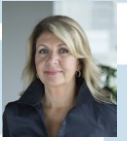
Dr Nelson Ogunshakin FICE OBE
Switzerland

FIDIC

World Trade Center 2
Geneva Airport
Box 311
CH-1215 Geneva 15
Switzerland
Tel: +41 22 568 0500
fidic@fidic.org
www.fidic.org



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