Ghana's Construction Industry, Yesterday, Today and Tomorrow: Towards greater professionalism

Maiden Annual Construction Industry Lecture 2018
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What is the construction industry and how important is it to Ghana?

What is the ultimate to aspire to attain?
How can we attain the desired ultimate?

What is being done now, and what are their chances of success?

Why is it important to develop the industry?

Whose job is it to endeavour to attain it, and what should the role of the main actors be?

What has been done to get industry to this point; what have been the successes and challenges?

What does the development of the construction industry involve?

What does a 'good' construction industry look like?
What is good practice in industry development

Where is Ghana's construction industry today?

Summary: the questions

28 billion
Population of Ghana

US$42.5 billion
GDP of Ghana

US$1,514
GDP per capita

20.2%
Urban access to impvd sanitation

584,513
Persons engaged in construction

316,368
Persons employed in construction

* Location specificity
* Government is a major client
* High cost, indivisible
* Long period of gestation
* Public safety, health implications
* Environmental impact
* Subject to regulation

Features of construction

GHC22.7 billion
GDP in construction

7.2%
Growth rate of GDP in construction

* Significantly large sector of economy
* Generates employment
* Has backward, forward linkage effects
* Output and employment multiplier
* Responsible for capital formation

Construction in the economy

54.7%
Urban population

27.9%
Urban population living in slums

39.0%, 2008
17.2%, 2010
16.4%, 2011
Growth of construction GDP

Sector of economy which plans, designs, erects, maintains, repairs, and demolishes buildings and infrastructure which are essential for long-term socio-economic development and for enhancing the quality of life. … Defining construction

309,132
Persons employed in informal sector in construction

"Gov't has taken measures [to] improve "our road, rail and aviation networks; expand access to potable water…; provide quality and affordable housing; improve health service delivery; improve access to education; expand and upgrade power generation, transmission,.. networks…"Min

18,832
(6.0%)
Females employed in construction

6.8%
Contribution of construction to total number of persons engaged

101,154
Apprentices in construction

Ministries and their roles in construction

<table>
<tr><th>Materials</th><th>Human Resources</th><th>Equipment &Technology</th><th>Finance</th><th>Procedures, Processes</th><th>Land</th></tr>
<tr><td colspan="5">Ministry of Works and Housing</td><td rowspan="3">Ministry of Lands and Natural Resources</td></tr>
<tr><td colspan="5">Ministry of Roads and Highways</td></tr>
<tr><td colspan="5">Ministry of Railways Development</td></tr>
<tr><td colspan="5">Ministry of Water Resources and Sanitation</td><td></td></tr>
<tr><td colspan="5">Ministry of Energy</td><td></td></tr>
<tr><td>Ministry of Trade and Industries</td><td colspan="2">Ministry of Education</td><td>Ministry of Finance</td><td>Ministry of Justice</td><td></td></tr>
<tr><td>Ministry of Business Development</td><td colspan="2">Ministry of Employment and Labour Relations</td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td colspan="2">Ministry of Trade and Industries</td><td></td><td></td></tr>
<tr><td></td><td></td><td colspan="2">Ministry of Business Development</td><td></td><td></td></tr>
</table>

* Ministry of Works and Housing
* Ministry of Road Transport
  …No construction industry regulatory and / or development agency

Main ministries admin responsibility

* Land Use & Spatial Planning Auth
* Metropolitan, Municipal and District Authorities (MMDAs)
* Ghana Environmental Protection Authority

Other major agencies

* L.I. 1630 National Building Regulations 1996 – erection, alteration, maintenance of buildings
* Cap 84 Town and Country Planning Act – use of land
* Local Government Law 1993 – Act 462 sections 49-57 … right of MMDAs to grant permits for development
* Environmental Assessment Regulation, L.I. 1652, 1999 – guidelines for "general construction and services" released in 2010

Main building laws

1. Architects Registration Council
2. Engineering Council

Regulation of the professions

Public Procurement Act 2003 (Act 663) (amended in 2016)

Regulation of public procurement

* Surveyors Bill
* Real Estate Bill
* Building Maintenance Bill
* Condominium Bill

Other laws under development

* Department of Feeder Roads
* Department of Urban Roads
* Ghana Highway Authority
* Regional Co-ordinating Councils
* MMDAs

Main public procurement entities

* State Housing Corporation
* Tema Development Corporation
* SSNIT

Government-linked client institutions

* Min of Local Government and Rural Development
* Min of Railways Development
* Min of Road Transport
* Min of Water Resource and Sanitation
* Min of Works and Housing
* Min of Education
* Ministry of Health

Main client ministries

Registration of contractors – by Min of Works & Housing; and Min of Road Transport

…Firms classified by type of work; categorised by track record, paid-up capital, asset holdings, personnel to indicate tendering limit

…Periodic re-registration.

Registration of contractors

Building for The Future

The Scottish Construction Industry's Strategy

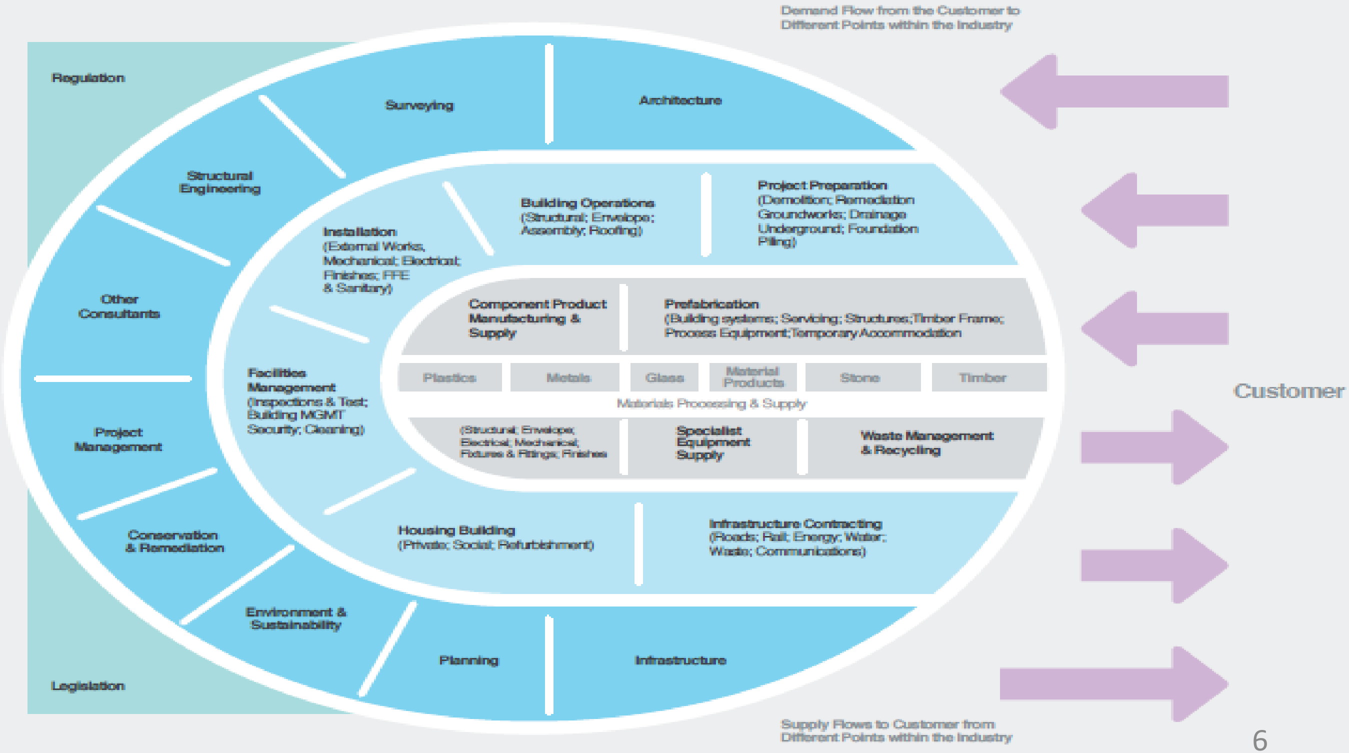
2013-2016

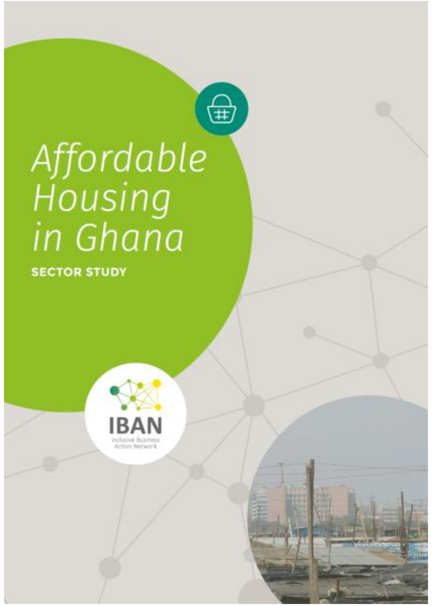
CONSTRUCTION SCOTLAND

Appendix 1.0
Industry Map

This diagram depicts the various subsectors that constitute Scotland's construction industry. It also attempts to illustrate how work flows through the industry and how subsectors interact with each other. The professional areas of the industry are shown in the outer ring, with the operational aspects in the middle ring and the supply chain in the centre.

This will be further developed over the coming months.





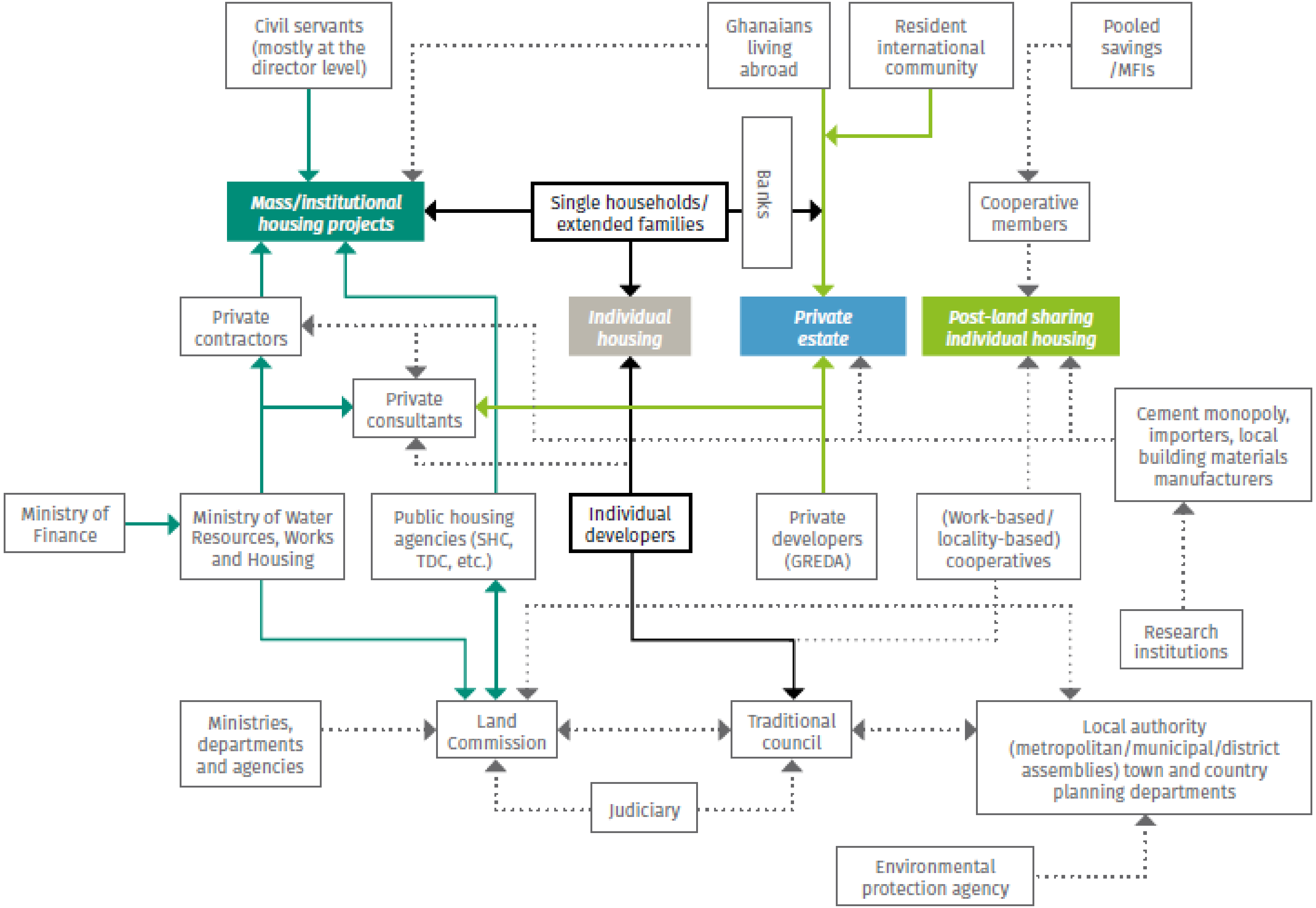
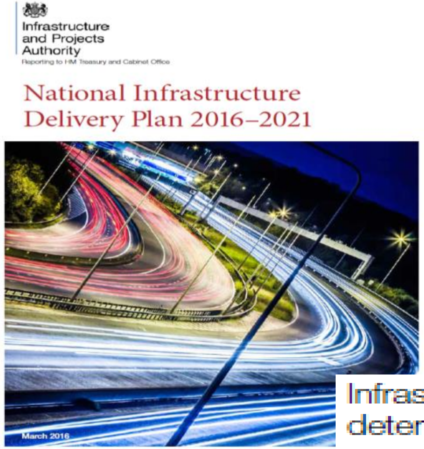


Figure 8 • IDENTIFIED HOUSING SECTOR STAKEHOLDERS IN GHANA

Features of construction industry and their implications

- location specificity ...economic impact; adverse physical, social impacts
- high expense, indivisibility ...implications for affordability, access to funding, finance; implications of lack of completion
- significant part of economy; stimulator of activity in economy – balance wheel of economy
- long period of gestation ...implications for macro-level planning for infrastructure and for industry …so, capacity, capability
- government has major role ...as client, regulator, administrator, facilitator
- involvement of many players, stakeholders
- generator of employment …depends on technology choice, balancing of many factors
- bulkiness of material inputs …importance of logistics, delineates local markets… all things being equal, domestic firms should be dominant
- importance of operating environment.



Infrastructure is the foundation upon which our economy is built. The government remains determined to deliver better infrastructure in the UK to grow the economy and improve opportunities for people across the country.

For the first time this new National Infrastructure Delivery Plan brings together the government's plans for economic infrastructure over the next 5 years with those to support delivery of housing and social infrastructure. This is reflected by the government's commitment to invest over £100 billion by 2020-21, alongside significant ongoing private sector investment in our infrastructure.[1]

This investment will drive wider economic benefits, including:

- supporting growth and creating jobs in the short term as projects are built – especially where public investment is used to attract private investment
- raising the productive capacity of the economy in the long term as the benefits of new infrastructure are felt; reduced transaction costs; larger and more integrated labour and product markets; and better opportunities to collaborate and innovate
- driving efficiency – enabling greater specialisation and economies of scale
- boosting international competitiveness – attracting inward investment and enabling trade with foreign partners

WORLD ECONOMIC FORUM

COMMITTED TO IMPROVING THE STATE OF THE WORLD

Insight Report

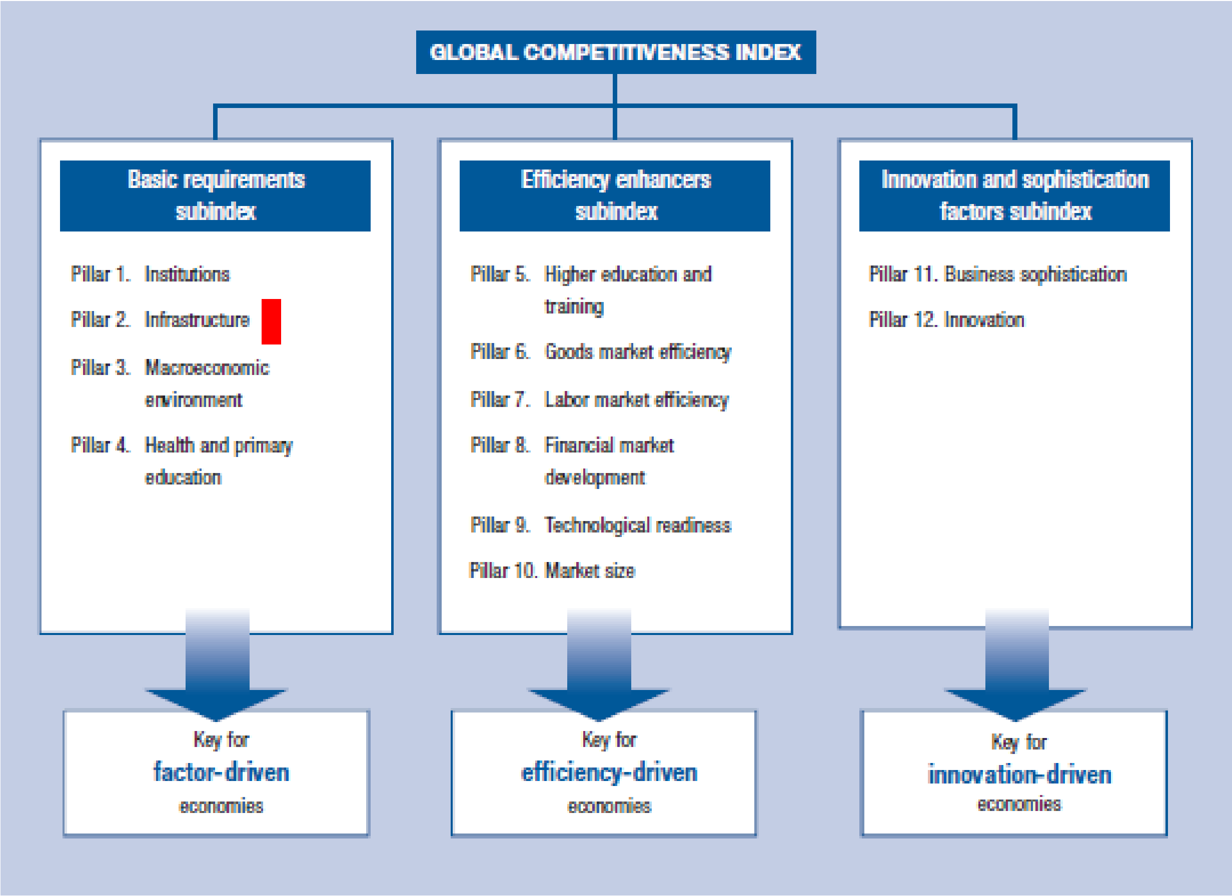
The Global Competitiveness Report 2017–2018

Klaus Schwab, World Economic Forum

1 Switzerland
2 USA
3 Singapore
6 Hong Kong
8 UK
17 UAE

Rank	Economy	Score[1]	Prev.[2]	Trend[3]
1	Switzerland	5.86	1	
2	United States	5.85	3	
3	Singapore	5.71	2	
4	Netherlands	5.66	4	
5	Germany	5.65	5	
6	Hong Kong SAR	5.53	9	
7	Sweden	5.52	6	
8	United Kingdom	5.51	7	
9	Japan	5.49	8	
10	Finland	5.49	10	
11	Norway	5.40	11	
12	Denmark	5.39	12	
13	New Zealand	5.37	13	
14	Canada	5.35	15	
15	Taiwan, China	5.33	14	
16	Israel	5.31	24	
17	United Arab Emirates	5.30	16	
18	Austria	5.25	19	
19	Luxembourg	5.23	20	
20	Belgium	5.23	17	
21	Australia	5.19	22	
22	France	5.18	21	
23	Malaysia	5.17	25	
24	Ireland	5.16	23	
25	Qatar	5.11	18	
26	Korea, Rep.	5.07	26	
27	China	5.00	28	
28	Iceland	4.99	27	
29	Estonia	4.85	30	
30	Saudi Arabia	4.83	29	
31	Czech Republic	4.77	31	
32	Thailand	4.72	34	
33	Chile	4.71	33	
34	Spain	4.70	32	
35	Azerbaijan	4.69	37	
36	Indonesia	4.68	41	
37	Malta	4.65	40	
38	Russian Federation	4.64	43	
39	Poland	4.59	36	
40	India	4.59	39	
41	Lithuania	4.58	35	
42	Portugal	4.57	46	
43	Italy	4.54	44	
44	Bahrain	4.54	48	
45	Mauritius	4.52	45	
46	Brunei Darussalam	4.52	58	
47	Costa Rica	4.50	54	
48	Slovenia	4.48	56	
49	Bulgaria	4.46	50	
50	Panama	4.44	42	
51	Mexico	4.44	51	
52	Kuwait	4.43	38	
53	Turkey	4.42	55	
54	Latvia	4.40	49	
55	Viet Nam	4.36	60	
56	Philippines	4.35	57	
57	Kazakhstan	4.35	53	
58	Rwanda	4.35	52	
59	Slovak Republic	4.33	65	
60	Hungary	4.33	69	
61	South Africa	4.32	47	
62	Oman	4.31	66	
63	Botswana	4.30	64	
64	Cyprus	4.30	83	
65	Jordan	4.30	63	
66	Colombia	4.29	61	
67	Georgia	4.28	59	
68	Romania	4.28	62	
69	Iran, Islamic Rep.	4.27	76	
70	Jamaica	4.25	75	
71	Morocco	4.24	70	
72	Peru	4.22	67	
73	Armenia	4.19	79	
74	Croatia	4.19	74	
75	Albania	4.18	80	
76	Uruguay	4.15	73	
77	Montenegro	4.15	82	
78	Serbia	4.14	90	
79	Tajikistan	4.14	77	
80	Brazil	4.14	81	
81	Ukraine	4.11	85	
82	Bhutan	4.10	97	
83	Trinidad and Tobago	4.09	94	
84	Guatemala	4.08	78	
85	Sri Lanka	4.08	71	
86	Algeria	4.07	87	
87	Greece	4.02	86	
88	Nepal	4.02	98	
89	Moldova	3.99	100	
90	Namibia	3.99	84	
91	Kenya	3.98	96	
92	Argentina	3.95	104	
93	Nicaragua	3.95	108	
94	Cambodia	3.93	89	
95	Tunisia	3.93	95	
96	Honduras	3.92	88	
97	Ecuador	3.91	91	
98	Lao PDR	3.91	93	
99	Bangladesh	3.91	106	
100	Egypt	3.90	115	
101	Mongolia	3.90	102	
102	Kyrgyz Republic	3.90	111	
103	Bosnia and Herzegovina	3.87	107	
104	Dominican Republic	3.87	92	
105	Lebanon	3.84	101	
106	Senegal	3.81	112	
107	Seychelles	3.80	n/a	
108	Ethiopia	3.78	109	
109	El Salvador	3.77	105	
110	Cape Verde	3.76	110	
111	Ghana	3.72	114	
112	Paraguay	3.71	117	
113	Tanzania	3.71	116	
114	Uganda	3.70	113	
115	Pakistan	3.67	122	
116	Cameroon	3.65	119	
117	Gambia, The	3.61	123	
118	Zambia	3.52	118	
119	Guinea	3.47	n/a	
120	Benin	3.47	124	
121	Madagascar	3.40	128	
122	Swaziland	3.35	n/a	
123	Mali	3.33	125	
124	Zimbabwe	3.32	126	
125	Nigeria	3.30	127	
126	Congo, Democratic Rep.	3.27	129	
127	Venezuela	3.23	130	
128	Haiti	3.22	n/a	
129	Burundi	3.21	135	
130	Sierra Leone	3.20	132	
131	Lesotho	3.20	120	
132	Malawi	3.11	134	
133	Mauritania	3.09	137	
134	Liberia	3.08	131	
135	Chad	2.99	136	
136	Mozambique	2.89	133	
137	Yemen	2.87	138	

Figure 1: The Global Competitiveness Index framework



Note: See the appendix for the detailed structure of the GCI.

Infrastructure also influences directly:
* Pillar 5
* Pillar 6
* Pillar 9
* Pillar 10.

Switzerland

1st/137

The Global Competitiveness Index 2017-2018 edition

WORLD ECONOMIC FORUM

Key indicators, 2016

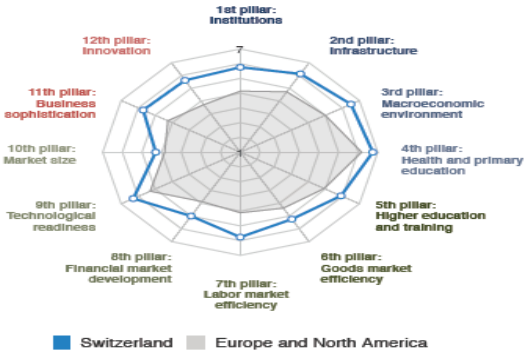
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	8.3	**GDP per capita** US$	79,242.3
GDP US$ billions	659.9	**GDP (PPP)** % world GDP	0.41

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	1	5.9		
Subindex A: Basic requirements	1	6.4		
1st pillar: Institutions	4	5.9		
2nd pillar: Infrastructure	6	6.3		
3rd pillar: Macroeconomic environment	3	6.6		
4th pillar: Health and primary education	2	6.8		
Subindex B: Efficiency enhancers	3	5.6		
5th pillar: Higher education and training	5	6.1		
6th pillar: Goods market efficiency	6	5.5		
7th pillar: Labor market efficiency	1	5.9		
8th pillar: Financial market development	8	5.3		
9th pillar: Technological readiness	2	6.4		
10th pillar: Market size	39	4.7		
Subindex C: Innovation and sophistication factors	1	5.9		
11th pillar: Business sophistication	1	5.9		
12th pillar: Innovation	1	5.8		

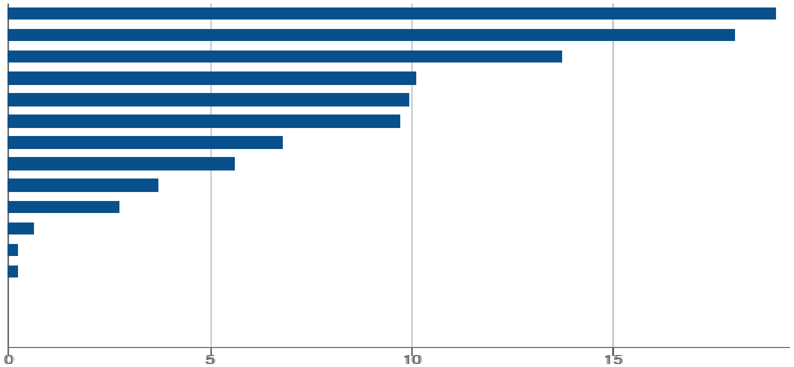
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	1 / 144	1 / 148	1 / 144	1 / 140	1 / 138	1 / 137
Score	5.7	5.7	5.7	5.8	5.8	5.9



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Factor	
Inefficient government bureaucracy	19.0
Restrictive labor regulations	18.0
Inadequately educated workforce	13.7
Tax regulations	10.1
Insufficient capacity to innovate	9.9
Access to financing	9.7
Tax rates	6.8
Policy instability	5.6
Foreign currency regulations	3.7
Poor work ethic in national labor force	2.7
Corruption	0.6
Poor public health	0.2
Inadequate supply of infrastructure	0.2
Inflation	0.0
Government instability/coups	0.0
Crime and theft	0.0



United States

2nd /137

The Global Competitiveness Index 2017-2018 edition

WORLD ECONOMIC FORUM

Key indicators, 2016

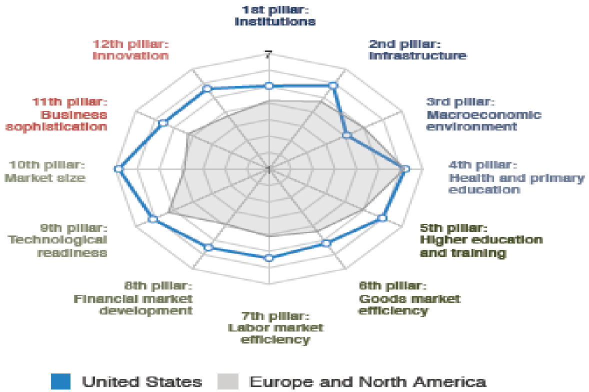
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	323.3	**GDP per capita** US$	57,436.4
GDP US$ billions	18,569.1	**GDP (PPP)** % world GDP	15.49

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	2	5.9		
Subindex A: Basic requirements	25	5.5		
1st pillar: Institutions	20	5.3		
2nd pillar: Infrastructure	9	6.0		
3rd pillar: Macroeconomic environment	83	4.5		
4th pillar: Health and primary education	29	6.3		
Subindex B: Efficiency enhancers	1	6.0		
5th pillar: Higher education and training	3	6.1		
6th pillar: Goods market efficiency	7	5.5		
7th pillar: Labor market efficiency	3	5.6		
8th pillar: Financial market development	2	5.7		
9th pillar: Technological readiness	6	6.2		
10th pillar: Market size	2	6.9		
Subindex C: Innovation and sophistication factors	2	5.8		
11th pillar: Business sophistication	2	5.8		
12th pillar: Innovation	2	5.8		

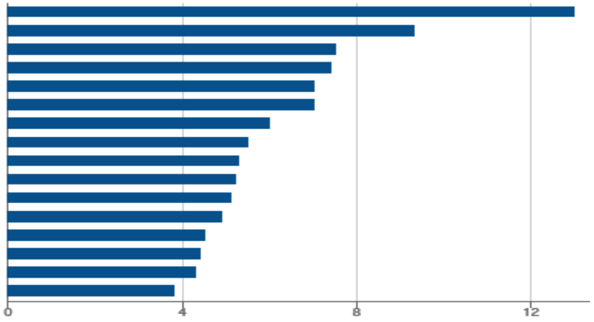
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	7 / 144	5 / 148	3 / 144	3 / 140	3 / 138	2 / 137
Score	5.5	5.5	5.5	5.6	5.7	5.9



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Tax rates	13.0
Tax regulations	9.3
Inflation	7.5
Restrictive labor regulations	7.4
Corruption	7.0
Access to financing	7.0
Inefficient government bureaucracy	6.0
Inadequate supply of infrastructure	5.5
Policy instability	5.3
Foreign currency regulations	5.2
Poor work ethic in national labor force	5.1
Crime and theft	4.9
Insufficient capacity to innovate	4.5
Inadequately educated workforce	4.4
Government instability/coups	4.3
Poor public health	3.8



Singapore

3rd / 137

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WORLD ECONOMIC FORUM

Key indicators, 2016

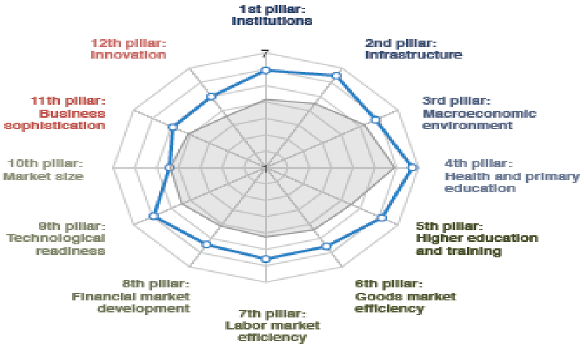
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	5.6	**GDP per capita** US$	52,960.7
GDP US$ billions	297.0	**GDP (PPP)** % world GDP	0.41

Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	2 / 144	2 / 148	2 / 144	2 / 140	2 / 138	3 / 137
Score	5.7	5.6	5.6	5.7	5.7	5.7

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	3	5.7		
Subindex A: Basic requirements	2	6.3		
1st pillar: Institutions	2	6.1		
2nd pillar: Infrastructure	2	6.5		
3rd pillar: Macroeconomic environment	18	6.0		
4th pillar: Health and primary education	3	6.8		
Subindex B: Efficiency enhancers	2	5.7		
5th pillar: Higher education and training	1	6.3		
6th pillar: Goods market efficiency	1	5.8		
7th pillar: Labor market efficiency	2	5.8		
8th pillar: Financial market development	3	5.7		
9th pillar: Technological readiness	14	6.1		
10th pillar: Market size	35	4.8		
Subindex C: Innovation and sophistication factors	12	5.2		
11th pillar: Business sophistication	18	5.2		
12th pillar: Innovation	9	5.3		

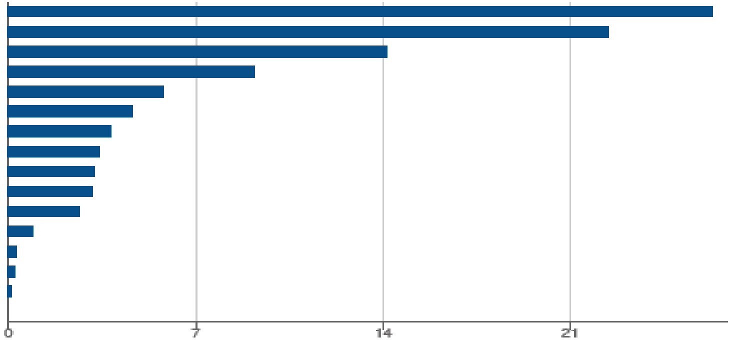


Singapore East Asia and Pacific

Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Restrictive labor regulations	26.3
Insufficient capacity to innovate	22.4
Inflation	14.1
Inadequately educated workforce	9.2
Poor work ethic in national labor force	5.8
Access to financing	4.6
Tax rates	3.8
Inadequate supply of infrastructure	3.4
Tax regulations	3.2
Inefficient government bureaucracy	3.1
Foreign currency regulations	2.6
Policy instability	0.9
Crime and theft	0.3
Poor public health	0.2
Government instability/coups	0.1
Corruption	0.0



Ghana

111st/137

The Global Competitiveness Index 2017-2018 edition

Key Indicators, 2016

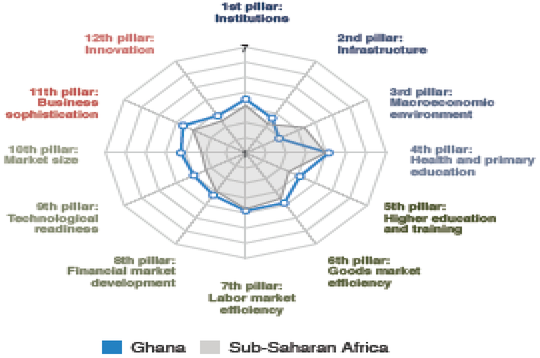
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	27.6	GDP per capita US$	1,569.0
GDP US$ billions	43.3	GDP (PPP) % world GDP	0.10

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	111	3.7		
Subindex A: Basic requirements	116	3.6		
1st pillar: Institutions	59	4.0		
2nd pillar: Infrastructure	103	3.3		
3rd pillar: Macroeconomic environment	131	2.6		
4th pillar: Health and primary education	120	4.5		
Subindex B: Efficiency enhancers	88	3.9		
5th pillar: Higher education and training	98	3.7		
6th pillar: Goods market efficiency	71	4.3		
7th pillar: Labor market efficiency	62	4.3		
8th pillar: Financial market development	84	3.8		
9th pillar: Technological readiness	93	3.6		
10th pillar: Market size	72	3.8		
Subindex C: Innovation and sophistication factors	60	3.7		
11th pillar: Business sophistication	60	4.1		
12th pillar: Innovation	57	3.4		

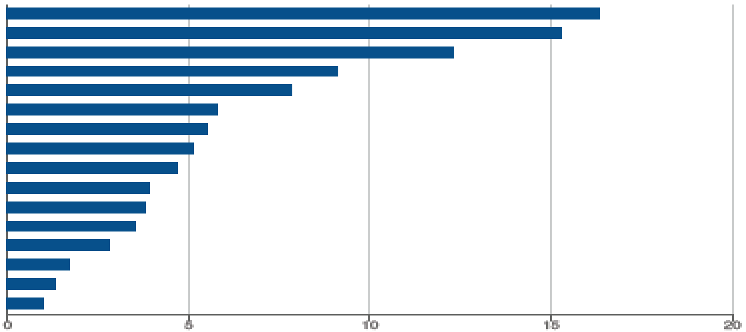
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	103 / 144	114 / 148	111 / 144	119 / 140	114 / 138	111 / 137
Score	3.8	3.7	3.7	3.6	3.7	3.7



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Factor	Score
Access to financing	16.3
Tax rates	15.3
Corruption	12.3
Inadequate supply of infrastructure	9.1
Inflation	7.8
Foreign currency regulations	5.8
Tax regulations	5.5
Policy instability	5.1
Poor work ethic in national labor force	4.7
Poor public health	3.9
Insufficient capacity to innovate	3.8
Inefficient government bureaucracy	3.5
Government instability/coups	2.8
Inadequately educated workforce	1.7
Restrictive labor regulations	1.3
Crime and theft	1.0



Note: From the list of factors, respondents to the World Economic Forum's Executive Opinion Survey were asked to select the five most problematic factors for doing business in their country and to rank them between 1 (most problematic) and 5. The score corresponds to the responses weighted according to their rankings.

Nigeria

125th/137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

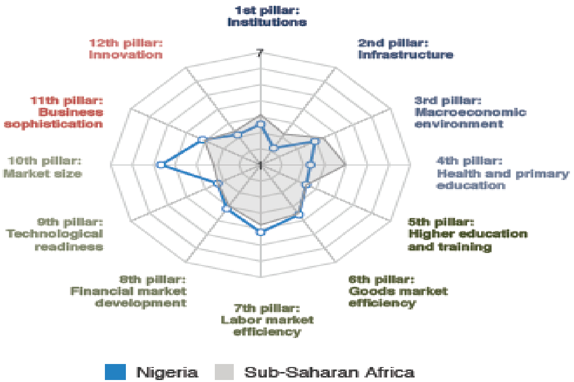
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	183.6	**GDP per capita** US$	2,210.6
GDP US$ billions	406.0	**GDP (PPP)** % world GDP	0.91

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	125	3.3		
Subindex A: Basic requirements	136	2.9		
1st pillar: Institutions	125	3.2		
2nd pillar: Infrastructure	132	2.0		
3rd pillar: Macroeconomic environment	122	3.5		
4th pillar: Health and primary education	136	3.0		
Subindex B: Efficiency enhancers	86	3.9		
5th pillar: Higher education and training	116	3.1		
6th pillar: Goods market efficiency	96	4.1		
7th pillar: Labor market efficiency	32	4.6		
8th pillar: Financial market development	91	3.7		
9th pillar: Technological readiness	112	3.0		
10th pillar: Market size	26	5.0		
Subindex C: Innovation and sophistication factors	108	3.3		
11th pillar: Business sophistication	94	3.7		
12th pillar: Innovation	112	2.8		

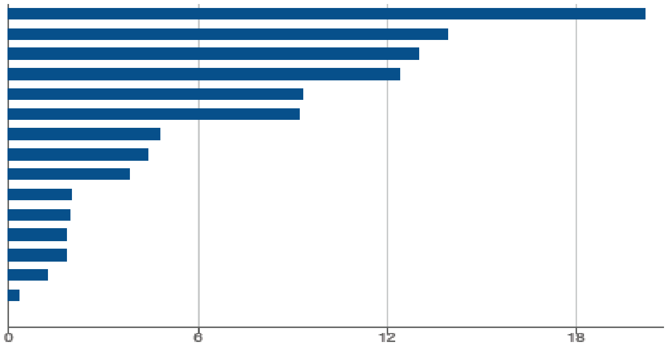
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	115 / 144	120 / 148	127 / 144	124 / 140	127 / 138	125 / 137
Score	3.7	3.6	3.4	3.5	3.4	3.3



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Factor	Score
Inadequate supply of infrastructure	20.2
Foreign currency regulations	13.9
Access to financing	13.0
Corruption	12.4
Inefficient government bureaucracy	9.3
Policy instability	9.2
Inflation	4.8
Government instability/coups	4.4
Inadequately educated workforce	3.8
Tax regulations	2.0
Crime and theft	1.9
Tax rates	1.8
Poor work ethic in national labor force	1.8
Insufficient capacity to innovate	1.2
Poor public health	0.3
Restrictive labor regulations	0.0



Indonesia

36th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

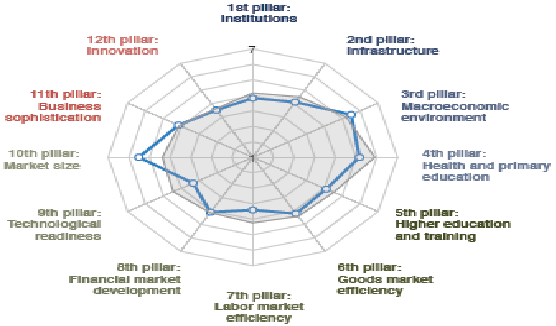
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	258.7	**GDP per capita** US$	3,604.3
GDP US$ billions	932.4	**GDP (PPP)** % world GDP	2.53

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	36	4.7		
Subindex A: Basic requirements	46	5.0		
1st pillar: Institutions	47	4.3		
2nd pillar: Infrastructure	52	4.5		
3rd pillar: Macroeconomic environment	26	5.7		
4th pillar: Health and primary education	94	5.4		
Subindex B: Efficiency enhancers	41	4.5		
5th pillar: Higher education and training	64	4.5		
6th pillar: Goods market efficiency	43	4.6		
7th pillar: Labor market efficiency	96	3.9		
8th pillar: Financial market development	37	4.5		
9th pillar: Technological readiness	80	3.9		
10th pillar: Market size	9	5.7		
Subindex C: Innovation and sophistication factors	31	4.3		
11th pillar: Business sophistication	32	4.6		
12th pillar: Innovation	31	4.0		

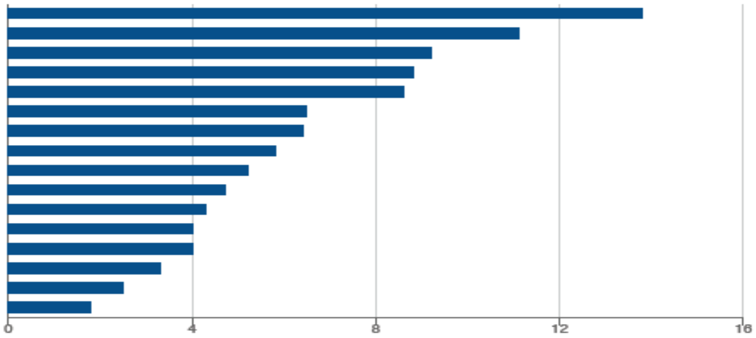
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	50 / 144	38 / 148	34 / 144	37 / 140	41 / 138	36 / 137
Score	4.4	4.5	4.6	4.5	4.5	4.7



Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Corruption	13.8
Inefficient government bureaucracy	11.1
Access to financing	9.2
Inadequate supply of infrastructure	8.8
Policy instability	8.6
Government instability/coups	6.5
Tax rates	6.4
Poor work ethic in national labor force	5.8
Tax regulations	5.2
Inflation	4.7
Inadequately educated workforce	4.3
Crime and theft	4.0
Restrictive labor regulations	4.0
Foreign currency regulations	3.3
Insufficient capacity to innovate	2.5
Poor public health	1.8



Rwanda

58th / 137

The Global Competitiveness Index 2017-2018 edition

Key indicators, 2016

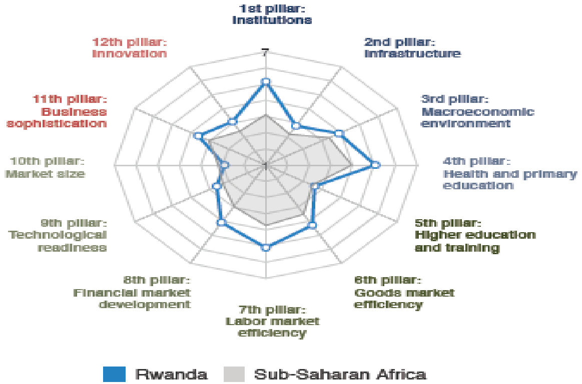
Source: International Monetary Fund; World Economic Outlook Database (April 2017)

Population millions	11.5	**GDP per capita** US$	729.1
GDP US$ billions	8.4	**GDP (PPP)** % world GDP	0.02

Performance overview

Index Component	Rank/137	Score (1-7)	Trend	Distance from best
Global Competitiveness Index	58	4.3		
Subindex A: Basic requirements	65	4.6		
1st pillar: Institutions	16	5.4		
2nd pillar: Infrastructure	98	3.4		
3rd pillar: Macroeconomic environment	92	4.3		
4th pillar: Health and primary education	98	5.3		
Subindex B: Efficiency enhancers	84	3.9		
5th pillar: Higher education and training	113	3.2		
6th pillar: Goods market efficiency	37	4.7		
7th pillar: Labor market efficiency	8	5.4		
8th pillar: Financial market development	34	4.5		
9th pillar: Technological readiness	101	3.2		
10th pillar: Market size	123	2.6		
Subindex C: Innovation and sophistication factors	49	3.9		
11th pillar: Business sophistication	61	4.1		
12th pillar: Innovation	44	3.6		

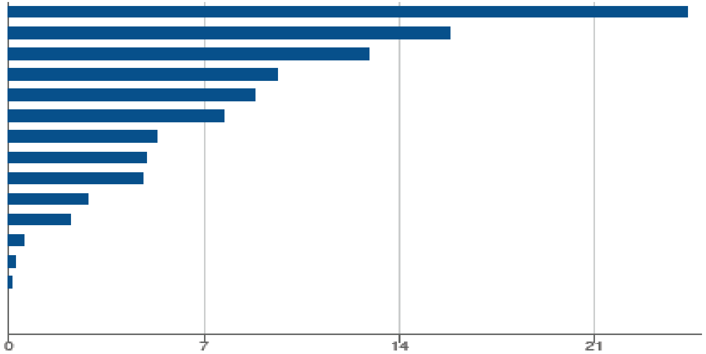
Edition	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Rank	63 / 144	66 / 148	62 / 144	58 / 140	52 / 138	58 / 137
Score	4.2	4.2	4.3	4.3	4.4	4.3

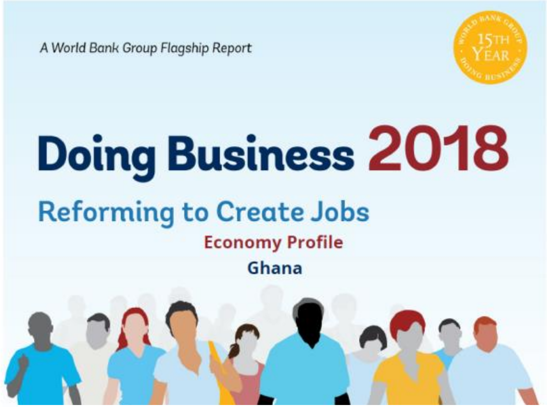


Most problematic factors for doing business

Source: World Economic Forum, Executive Opinion Survey 2017

Access to financing	24.3
Tax rates	15.8
Inadequately educated workforce	12.9
Inflation	9.6
Inadequate supply of infrastructure	8.8
Insufficient capacity to innovate	7.7
Tax regulations	5.3
Foreign currency regulations	4.9
Poor work ethic in national labor force	4.8
Restrictive labor regulations	2.8
Policy instability	2.2
Inefficient government bureaucracy	0.5
Poor public health	0.2
Crime and theft	0.1
Government instability/coups	0.0
Corruption	0.0





Rankings on Doing Business topics - Ghana

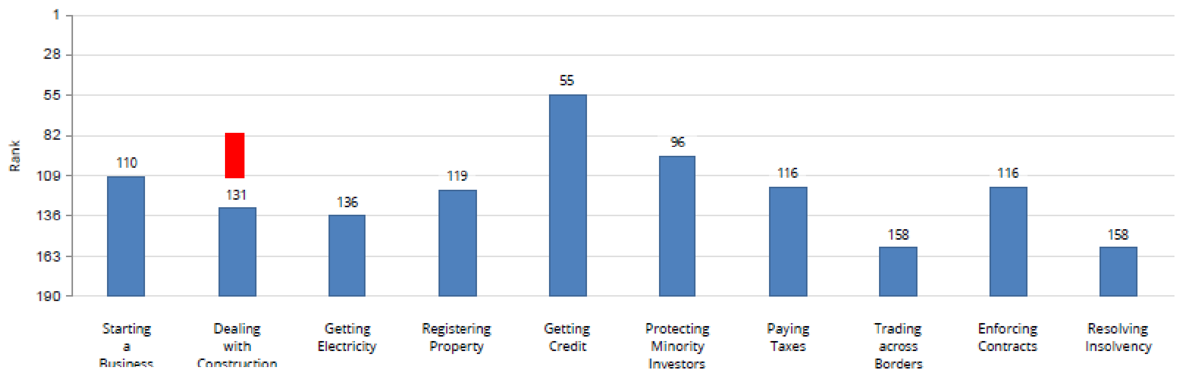
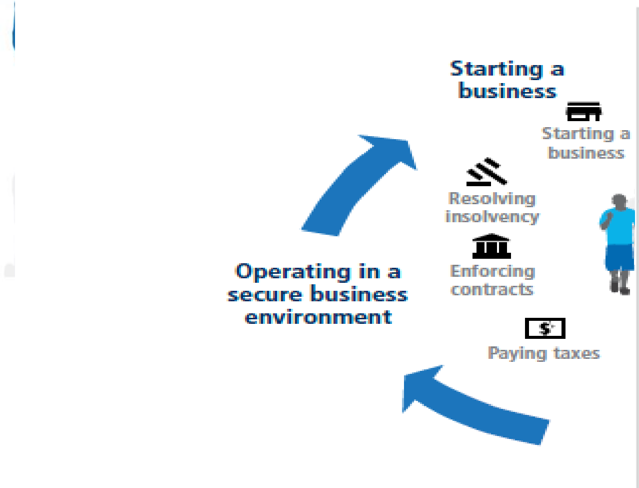


FIGURE 1.1 What is measured in *Doing Business*?

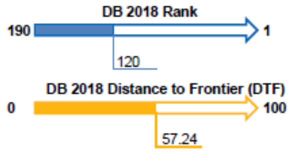


Source: *Doing Business* database.
Note: Labor market regulation is not included in the ease of doing business

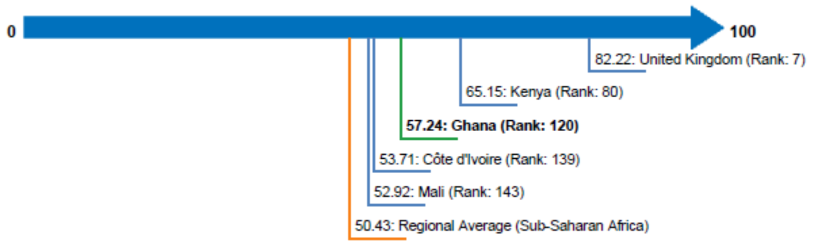
Ease of Doing Business in

Ghana

Region	Sub-Saharan Africa
Income Category	Lower middle income
Population	28,206,728
GNI Per Capita (US$)	1,380
City Covered	Accra

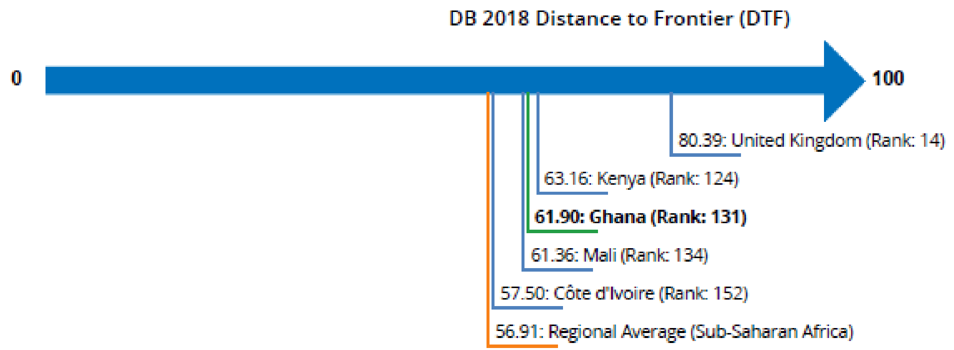


DB 2018 Distance to Frontier (DTF)



Note: The distance to frontier (DTF) measure shows the distance of each economy to the "frontier," which represents the best performance observed on each of the indicators across all economies in the Doing Business sample since 2005. An economy's distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the frontier. The ease of doing business ranking ranges from 1 to 190.

Figure – Dealing with Construction Permits in Ghana and comparator economies – Ranking and DTF



Standardized Warehouse	
Estimated value of warehouse	GHS 289,848.10
City Covered	Accra

Indicator	Ghana	Sub-Saharan Africa	OECD high income	Overall Best Performer
Procedures (number)	16	14.8	12.5	7.00 (Denmark)
Time (days)	170	147.5	154.6	27.5 (Korea, Rep.)
Cost (% of warehouse value)	5.4	9.9	1.6	0.10 (5 Economies)
Building quality control index (0-15)	9.0	8.0	11.4	15.00 (3 Economies)

To make Ghana “one of the most attractive destinations for investment in Africa, Government will aggressively implement major reforms of the business environment, through its business environment and regulatory reforms initiatives”. Reform agenda is has these strategic components:

- improve Ghana’s ranking on World Bank’s Ease of Doing Business Index
- establish an electronic register for business regulations, legislation, processes, to be a complete on-line repository of business laws; transparency for investors
- conduct a rolling review of business regulations using the Guillotine approach, which will ensure reduction in cost, volume of regulatory compliance
- set up centralised web portal for business regulations, to act as a one-stop portal for two-way public consultations
- design targeted regulatory reliefs for SMEs, to reduce entry barriers entrepreneurs and start-ups
- establish regulatory reform units within MDAs, conduct periodic regu impact assessments across government
- develop communication, advocacy and public-private dialogue with s to enhance the inclusive and open process of stakeholder engageme

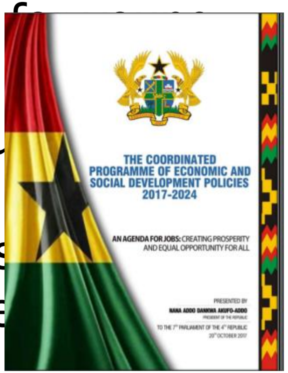
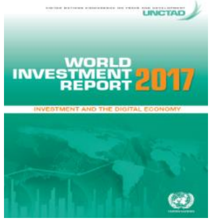


Table II.1. FDI flows by region, 2014–2016 (Billions of dollars and per cent)

Group of economies/region	FDI inflows			FDI outflows		
	2014	2015	2016	2014	2015	2016
World	**1 324**	**1 774**	**1 746**	**1 253**	**1 594**	**1 452**
Developed economies	563	984	1 032	708	1 173	1 044
Europe	272	566	533	221	666	515
North America	231	390	425	353	370	365
Developing economies	704	752	646	473	389	383
Africa	71	61	59	28	18	18
Asia	460	524	443	412	339	363
East Asia	257	318	260	289	237	291
South-East Asia	130	127	101	89	56	35
South Asia	41	51	54	12	8	6
West Asia	31	28	28	23	38	31
Latin America and the Caribbean	170	165	142	31	31	1
Oceania	2	2	2	1	1	1
Transition economies	57	38	68	73	32	25
Structurally weak, vulnerable and small economies[a]	**68**	**64**	**58**	**26**	**14**	**10**
LDCs	41	44	38	18	9	12
LLDCs	28	25	24	6	5	-2
SIDS	6	4	4	0.3	0.7	0.2
Memorandum: percentage share in world FDI flows						
Developed economies	42.6	55.5	59.1	56.5	73.6	71.9
Europe	20.6	31.9	30.5	17.7	41.8	35.4
North America	17.4	22.0	24.3	28.1	23.2	25.2
Developing economies	53.2	42.4	37.0	37.7	24.4	26.4
Africa	5.4	3.5	3.4	2.3	1.1	1.3
Asia	34.8	29.5	25.3	32.9	21.2	25.0
East Asia	19.4	17.9	14.9	23.0	14.9	20.1
South-East Asia	9.9	7.1	5.8	7.1	3.5	2.4
South Asia	3.1	2.9	3.1	1.0	0.5	0.4
West Asia	2.3	1.6	1.6	1.8	2.4	2.1
Latin America and the Caribbean	12.8	9.3	8.1	2.5	2.0	0.1
Oceania	0.2	0.1	0.1	0.1	0.1	0.1
Transition economies	4.3	2.1	3.9	5.8	2.0	1.7
Structurally weak, vulnerable and small economies[a]	**5.1**	**3.6**	**3.3**	**2.1**	**0.9**	**0.7**
LDCs	3.1	2.5	2.2	1.5	0.6	0.8
LLDCs	2.1	1.4	1.4	0.5	0.3	-0.1
SIDS	0.4	0.2	0.2	0.03	0.04	0.01

Source: ©UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics).
Note: LDCs = least developed countries, LLDCs = landlocked developing countries, SIDS = small island developing States.
[a] Without double counting countries that are part of multiple groups.

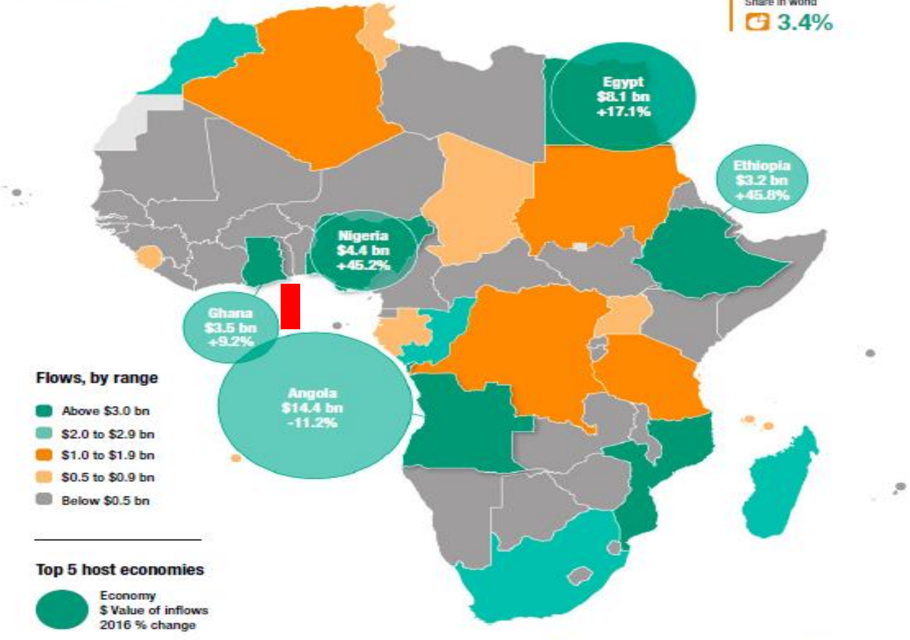


DEVELOPING ECONOMIES
AFRICA
FDI flows, top 5 host economies, 2016 (Value and change)

2016 Inflows
59.4 bn

2016 Decrease
-3.5%

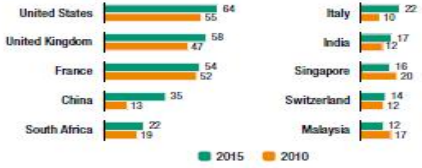
Share in world
3.4%



Outflows: top 5 home economies
(Billions of dollars and 2016 growth)

Angola	$10.7	+34.7%
South Africa	$3.4	-41.1%
Nigeria	$1.3	-9.1%
Morocco	$0.6	-2.2%
Botswana	$0.6	+244.5%

Figure A. Top 10 investor economies by FDI stock, 2010 and 2015 (Billions of dollars)



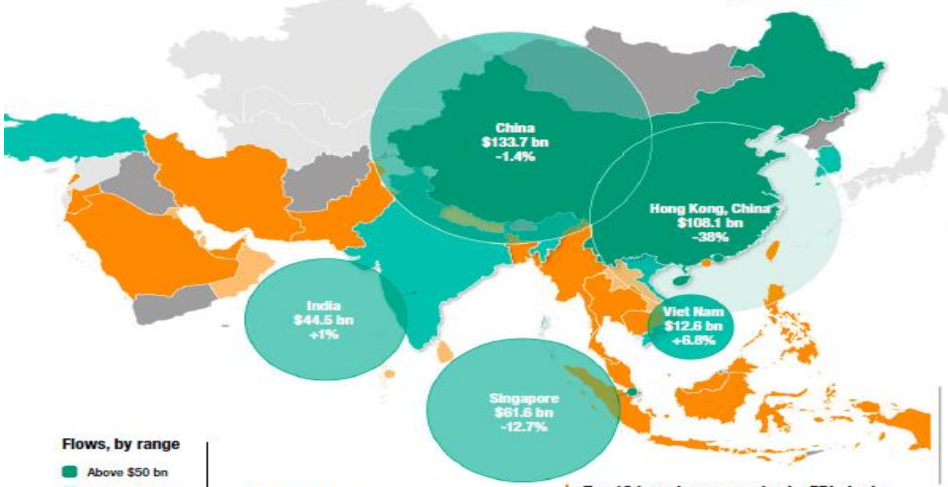
Source: ©UNCTAD.
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Final boundary between the Republic of Sudan and the Republic of South Sudan has not yet been determined. Final status of the Abyei area is not yet determined.

DEVELOPING ASIA
FDI flows, top 5 host economies, 2016 (Value and change)

2016 Inflows
442.7 bn

2016 Decrease
-15.5%

Share in world
25.3%



Flows, by range
- Above $50 bn
- $10 to $49 bn
- $1.0 to $9.9 bn
- $0.1 to $0.9 bn
- Below $0.1 bn

Top 5 host economies
Economy
$ Value of inflows
2016 % change

Outflows: top 5 home economies
(Billions of dollars and 2016 growth)

China	$183.1	+43.5%
Hong Kong, China	$62.5	-13.0%
Republic of Korea	$27.3	+14.8%
Singapore	$23.9	-23.9%
Taiwan Province of China	$17.8	+21.3%

Figure A. Top 10 investor economies by FDI stock, 2010 and 2015 (Billions of dollars)

WORLD INVESTMENT REPORT 2017

Source: ©UNCTAD.
Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations. Dotted line represents approximately the Line of Control in Jammu and Kashmir agreed upon by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties.

GOVT TO DEVELOP SUSTAINABLE AGRICULTURALSECTOR—PRESIDENT AKUFO-ADDO

Farmers’ Day Celebration in Kumasi, 2018

President Nana Addo Dankwa Akufo-Addo re
committed to developing a sustainable, sour
performance of all value chain actors.

So, 320 small dams and dugout sites in 64 d
be evaluated in 2018.

Also, 51 dams in Volta, Greater Accra, Centr
rehabilitation.

Water transmission project from rivers Oti, E
begins 2019, bringing 90,000 hectares unde

President noted: a thriving agricultural secto
generates jobs.

President Akufo-Addo (arrowed), in a group photo with the award winners

“We can, and we should overcome these problems, if we keep our focus, ensure efficient and effective implementation of policies and programmes, and rally fully behind Government to give agriculture the decisive impulse it needs, to take its pride of place once again,” the President said.

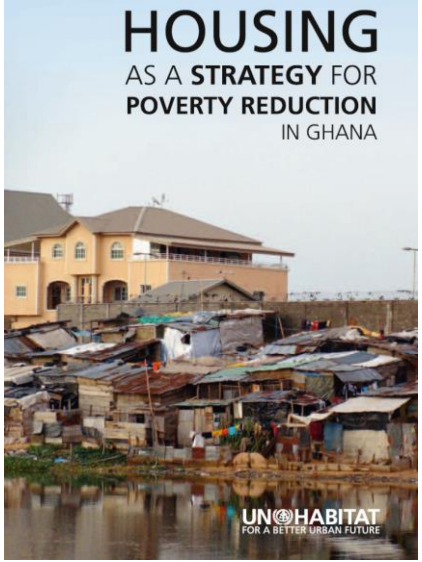
President: road infrastructure another area of critical importance for private agriculture investment. So, government would intensify efforts to develop road network through Ghana Infrastructure Investment Fund; many strategic roads would be developed with support from multilateral institutions.

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/news/4242-govt-to-develop-sustainable-agricultural-sector-president-akufo-addo

https://www.bbc.co.uk/news/resources/idt-sh/dundee_the_city_with_grand_designs

https://www.bbc.co.uk/news/resources/idt-sh/dundee_the_city_with_grand_designs



Picture 1: A house in the Control Community of Kodie

Picture 4: A house in the Experimental Community of Kodie Habitat

Picture 2: A house in the Control Community of Hwidiem

Picture 3: A house in the Experimental Community of Konongo Habitat

Picture 7: Toilet facility in the Control Community

Picture 6: Waste water from a bathhouse in the Control Community

Picture 5: Borehole serving the Experimental Communities

"A comparison of consciously designed and implemented housing scheme with an old and run-down housing environment appears to lend credence to the fact that, an enhanced housing environment can create conditions that are conducive for poverty reduction. Consequently, it may be inferred that housing can be used as a tool for poverty reduction but this must be consciously designed and targeted to ensure that the desired impacts are realized." (p. 28)

- In India, 40-45% of steel; 85% of paint; 65-70% of glass used in construction.
- “Forward and backward multiplier impact of construction industry is significant” (Planning Commission, 2013, p. 362).
- In India, construction is second largest employer after agriculture. Total employment:
  - 14.5 million in 1995
  - 31.5 million in 2005
  - 41 million in 2011.
- Government of Ireland (2014): in path to economic recovery, country needs strong, sustainable construction industry, because it needed good quality homes, high-quality commercial developments to underpin recovery and growth, and infrastructure fit for the future.

Investing $1 Trillion in a Balanced Portfolio Would Deliver 3 Million Jobs

POTENTIAL PORTFOLIO INVESTMENT ALLOCATIONS

	JOBS PER $BILLION INVESTED	INVEST IN SECTORS WITH HIGHEST CRITICALITY (ASCE GRADE OF D+ OR BELOW)	INVEST PRIMARILY IN JOB-CREATING SECTORS BUT COVER CRITICAL GAPS	INVEST IN JOB-MAXIMIZING SECTORS ONLY
Airports	3,900	$130 billion	$120 billion	$250 billion
Bridges	1,800	—	$57 billion	—
Highways	2,200	$130 billion	$120 billion	—
Hospitals	4,500	—	$120 billion	$250 billion
Inland waterways	800	$350 billion	$57 billion	—
Mass transit	900	$130 billion	$57 billion	—
Oil and gas	4,200	$80 billion	$120 billion	$250 billion
Rail	1,200	—	$57 billion	—
Rural broadband	2,500	—	$57 billion	—
Seaports	4,400	—	$120 billion	$250 billion
Transmission and distribution	1,700	$80 billion	$57 billion	—
Water and waste	1,700	$130 billion	$57 billion	—
TOTAL JOBS CREATED		**1.6 million**	**3.0 million**	**4.4 million**

An additional $350 billion in investment would be required to achieve 4 million jobs when optimizing for a balanced portfolio

Consultancy.uk (2017) Infrastructure investment could create employment boom in US, https://www.consultancy.uk/news/13398/infrastructure-investment-could-create-employment-boom-in-us

SUSTAINABLE DEVELOPMENT GOALS

Sustainable Development Goals

Basic human and national needs

- Goal 1. End poverty in all its forms everywhere
- Goal 2. End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3. Ensure healthy lives and promote well-being for all at all ages
- Goal 4. Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5. Achieve gender equality and empower all women and girls
- Goal 8. Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all

Some of construction's results

- Goal 6. Ensure availability and sustainable management of water and sanitation for all
- Goal 7. Ensure access to affordable, reliable, sustainable and modern energy for all

What construction must do

- Goal 9. Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation
- Goal 11. Make cities and human settlements inclusive, safe, resilient and sustainable

Sustainable Development Goals ..2

Broad international goals

- Goal 10. Reduce inequality within and among countries
- Goal 16. Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels

A key international 'wherewithal'

- Goal 17. Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

Construction's inputs and methods

- Goal 12. Ensure sustainable consumption and production patterns
- Goal 13. Take urgent action to combat climate change and its impacts*
- Goal 14. Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15. Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Long-Term National Development Plan of NDPC: by 2057, on Ghana's 100th independence anniversary, country's economy should be:

- ranked among high-income countries
- export-oriented, industrialised, diversified, resilient
- driven by Ghanaian entrepreneurship
- characterised by high-value services
- dynamic, with a globally competitive manufacturing sector
- have an efficient agricultural sector capable of feeding the nation and exporting to global markets.

National Infrastructure Plan

Vision

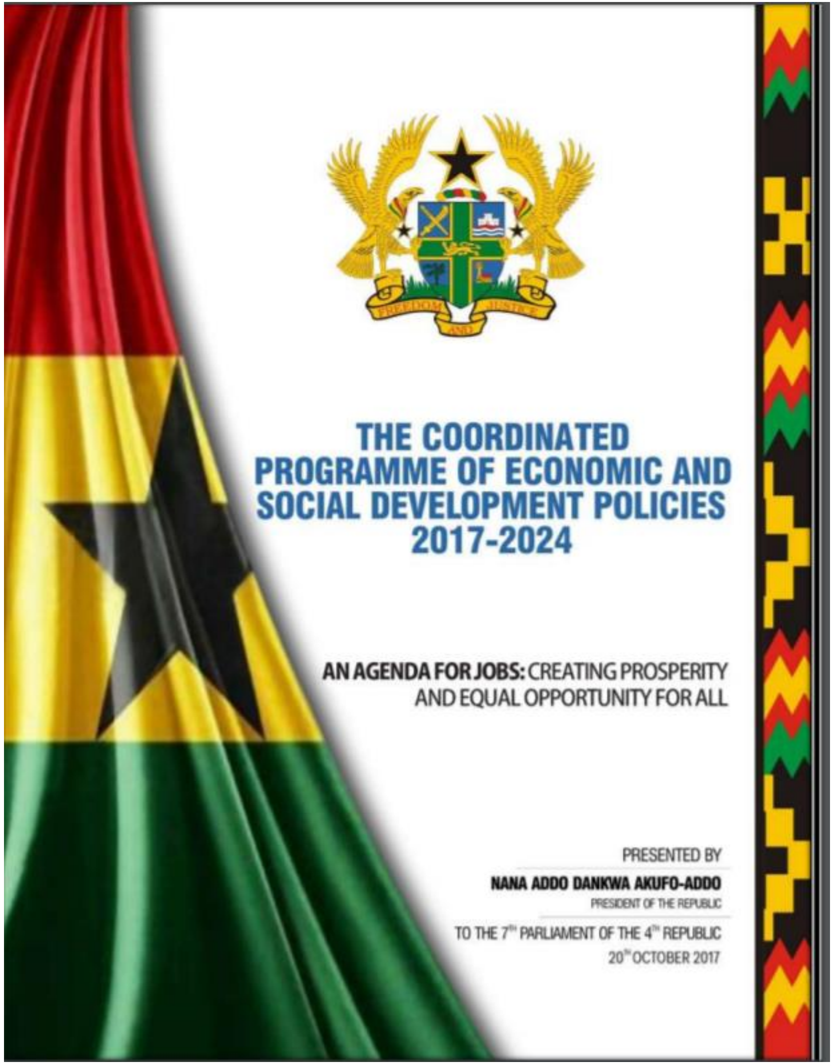
To build world-class infrastructure assets that are efficient, dependable, resilient, functional, accessible, and inclusive with the capacity to support Ghana's export-led growth and improve the quality of life of all Ghanaians.

Principles

1. Cost effective -- subject to rigorous standards of modern procurement practices to ensure value-for-money, while attaining the highest standards possible
2. Accessible -- especially for PWDs, the aged, children
3. Efficient -- designed to maximise the use of natural resources, such as natural light, air, land and space
4. Environmentally sustainable -- strike appropriat built environment and the need to preserve the future generations
5. Maintenance framework -- all infrastructure pla implementable and measurable frameworks for maximum benefit for the public across generations.

Construction Industry Development

Set industry-wide standards to deliver high-quality infrastructure, with institutionalised systems and culture for maintenance.



Vision:
To create "An optimistic, self-confident and prosperous nation, through the creative exploitation of our human and natural resources, and operating within a democratic, open and fair society in which mutual trust and economic opportunities exist for all."

Key goals:
1. build a prosperous country
2. create opportunities for all Ghanaians
3. safeguard the natural environment and ensure a resilient built environment
4. maintain a stable, united and safe country.

Aim: to, at least, double per capita GDP by 2024. Requires average annual growth rates of at least 7.2% from 2017 to 2024.
Focus on…
- reviving, strengthening manufacturing
- solving energy crisis
- aggressively promoting exports, especially high-value manufactures.

Per capita GDP to grow from US$1,515 in 2016
…to US$2,500 by 2020
…to US$3,500 by 2024.

Priority interventions in five major areas:
- economic development
- social development
- environment, infrastructure, human settlements
- governance, corruption, public accountability
- strengthening Ghana's international role.

Key strategic anchors:
- revitalising the economy
- transforming agriculture and industry
- strengthening social protection and inclusion
- revamping economic and social infrastructure
- reforming public service delivery institutions.

"Long-term objective of Govt's transport policy is to develop modern, integrated, and well maintained transportation infrastructure for accelerated growth and development. It ..seeks to make Ghana the transportation hub of ..West Africa."

Plans for Indonesia's GDP

2010

GDP: US$700bn
Income /capita: US$3000

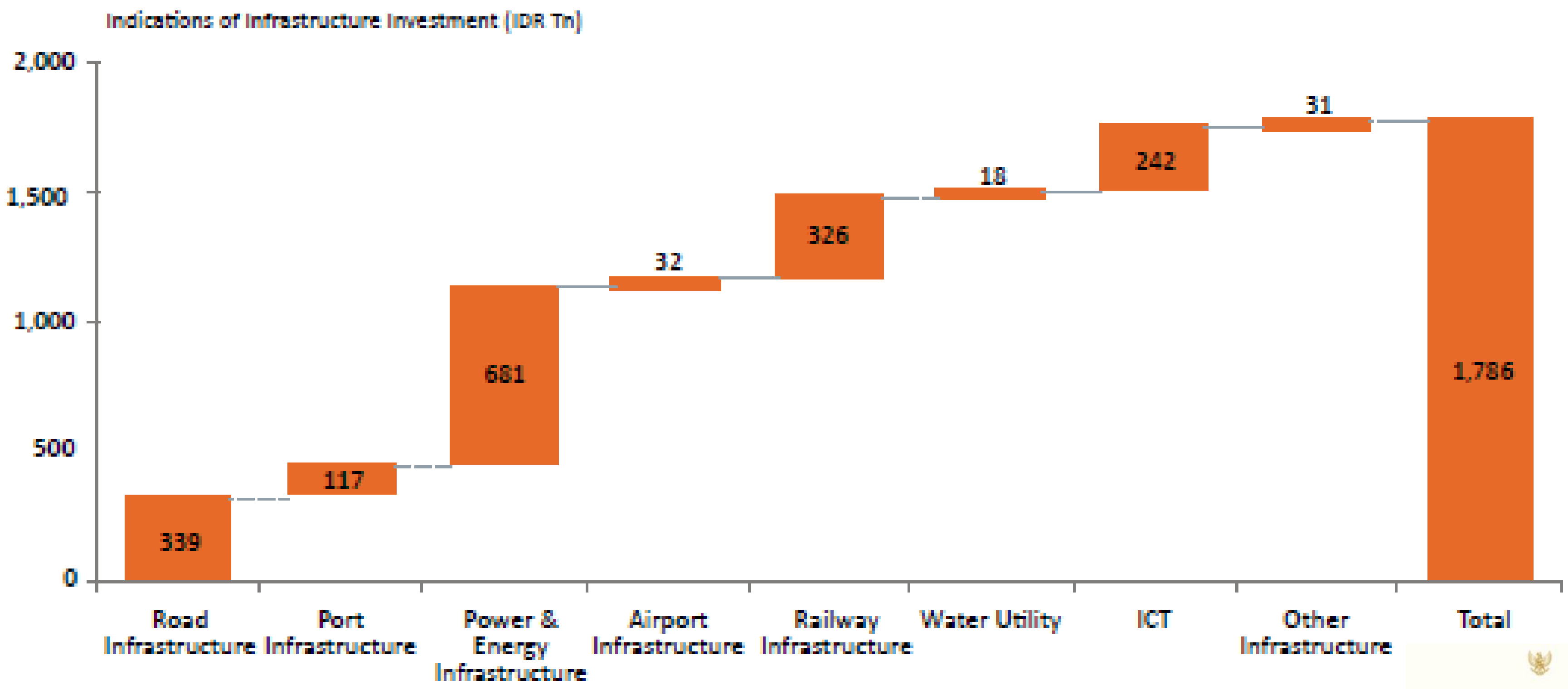
2025

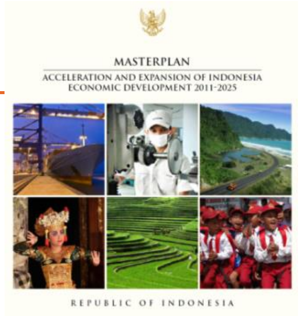
GDP: US$4.0-4.5 trillion
Income /capita: US$14,450-15,500

2045

GDP: US$15.0-15.7 trillion
Income /capita: US$44,500-49,000

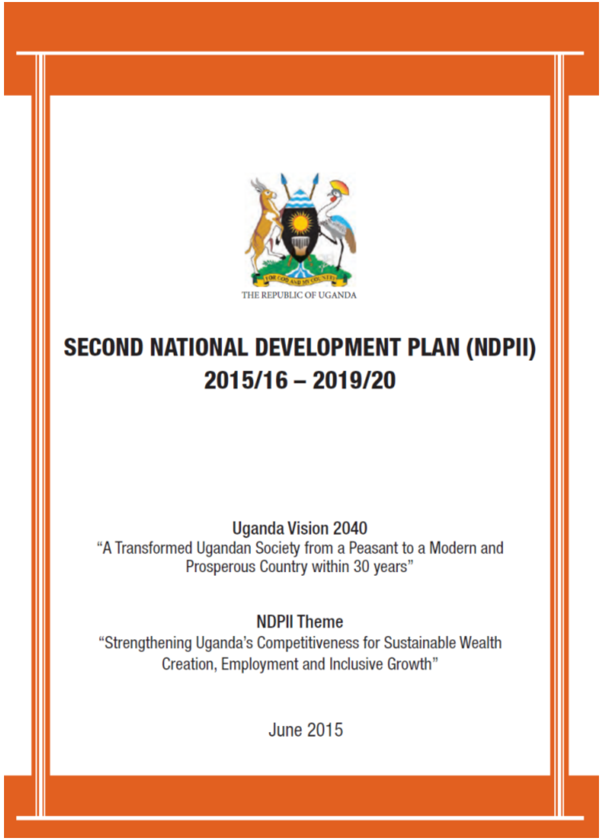
"With the implementation of MP3EI platform, Indonesia aims to position itself as the world's main food suppliers, as a processing centre for agricultural, fishery and natural resources, as well as a centre for global logistics by 2020 or earlier."





Indications of infrastructure investment in MP3EI


Uganda Vision 2040
Uganda Vision 2040
UGANDA VISION 2040
PAGE
| I


THE REPUBLIC OF UGANDA
SECOND NATIONAL DEVELOPMENT PLAN (NDPII)
2015/16 – 2019/20
Uganda Vision 2040
“A Transformed Ugandan Society from a Peasant to a Modern and Prosperous Country within 30 years”
NDPII Theme
“Strengthening Uganda’s Competitiveness for Sustainable Wealth Creation, Employment and Inclusive Growth”
June 2015


NATIONAL DEVELOPMENT PLAN 2030
Our future - make it work
OUR FUTURE
national planning commission
Department: The Presidency
REPUBLIC OF SOUTH AFRICA

Projects under Uganda Vision 2040

"Uganda Vision 2040 identifies key core projects that need to be started including:

- A Hi-tech ICT city and associated ICT infrastructure
- Large irrigation schemes in different parts of the country
- Phosphate industry in Tororo
- Iron ore industry in Muko, Kabale
- Five regional cities (Gulu, Mbale, Kampala, Mbarara, and Arua) and five strategic cities (Hoima, Nakasongola, Fortportal, Moroto, and Jinja)
- Four international airports
- A standard gauge railway network with high speed trains
- Oil Refinery and associated pipeline infrastructure
- Multi-lane paved national road net work linking major towns, cities and other strategic locations
- Globally competitive skills development centres
- Nuclear power and hydro power plants (Ayago, Isimba, Karuma, and Murchison Bay)
- Science and Technology parks in each regional city
- International and national referral hospitals in each regional cities."

Uganda's Vision is "A transformed Ugandan society from a peasant to a modern and prosperous country within 30 years".

Projections:

- Uganda to be lower middle income country by 2017
- Upper middle income category by 2032
- Target GDP/capita USD9500 in 2040.
- Uganda will be a first world country in next fifty years.
- To achieve this, average real GDP growth rate must be consistent at 8.2% per annum.

2ND PHASE OF THE KUMASI AIRPORT EXPANSION PROJECT BEGINS

President Nana Addo Dankwa Akufo-Addo on Wednesday cut the sod for commencement of 2nd phase of €66,350,000 Kumasi Airport Expansion Project.

Project will extend runway from 1,981m to 2,300m; construct new terminal building, with capacity for 1 million passengers per year, apron area and taxiway; ancillary works.

Project is part of government's multi-mo
railways road transportation, expected t nd
boost tourism potential of Ashanti.

President: since funding had been secur ate
cost overruns. Delivery of project on sch to
complete the work in 24 months.

Project forms part of government's visio
realise dream of making her an aviation

Widespread youth unemployment was g
implementation of the project, which wo

President: Ghana Airports Company and
airports were managed properly, duly protected, for future expansion projects, and to safeguard lives and property.

President Akufo-Addo cutting sod for the start of construction works on phase two of the Kumasi Airport project.

Source ISD (Rex Mainoo-Yeboah)

http://ghana.gov.gh/index.php/news/4733-2nd-phase-of-the-kumasi-airport-expansion-project-begins

What is "construction industry development"?

"a deliberate and managed process to improve the capacity and effectiveness of the construction industry to meet the national economic demand for building and civil engineering products, and to support sustained national economic and social development objectives."

(Task Group 29 of CIB, 1998)

What does "construction industry development" involve?

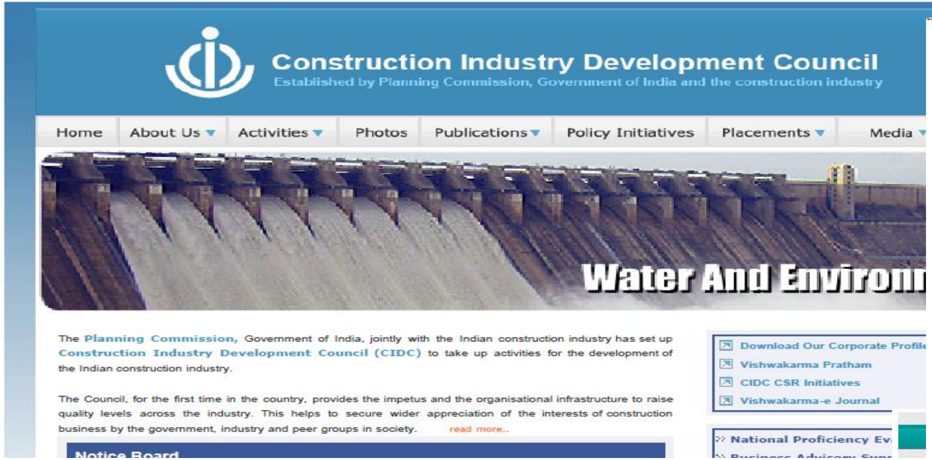
- Human Resource Development (Strategic)
- Materials Development (considering also globalisation)
- Technology Development (incl
- Corp segr
- Insti Deve priva
- Imp (valu

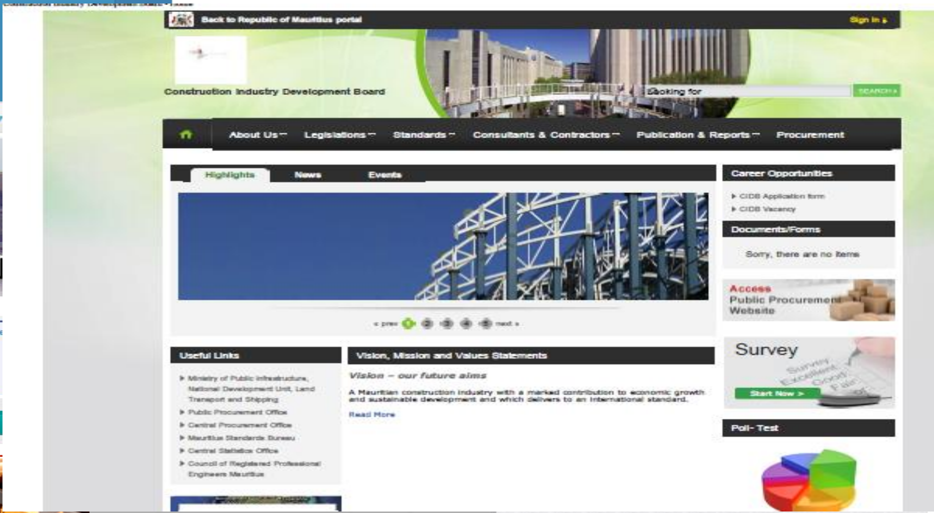
Industry development may be spearheaded by…

- a government ministry (China, Myanmar, Vietnam)
- a statutory agency (authority, board or council)
- a joint government-industry organisation (with a quasi-statutory mandate) (Indonesia)
- an industry organisation (UK).

Policy implications: possible adverse impact

- Construction, its development and role in economy must be understood because of possible adverse effects:
  - constructed goods are not productive in themselves
  - investment in construction takes funds from other 'areas'
  - excessive construction can be inflationary
  - imported materials can affect balance of payments
  - resource, capacity constraints can lead to inefficiency and waste in implementation
  - difficult to properly time investment in construction to yield desired result (long gestation period)
  - "local" nature of construction and its markets should be recognised, in large countries.


Construction Industry Development Council
Established by Planning Commission, Government of India and the construction industry
Home
About Us
Activities
Photos
Publications
Policy Initiatives
Placements
Media
Water And Environ
The Planning Commission, Government of India, jointly with the Indian construction industry has set up Construction Industry Development Council (CIDC) to take up activities for the development of the Indian construction industry.
The Council, for the first time in the country, provides the impetus and the organisational infrastructure to raise quality levels across the industry. This helps to secure wider appreciation of the interests of construction business by the government, industry and peer groups in society. read more..
Download Our Corporate Profile
Vishwakarma Pratham
CIDC CSR Initiatives
Vishwakarma-e Journal
National Proficiency Ev
Notice Board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Construction Industry Development Board
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News
Events
Career Opportunities
CIDB Application form
CIDB Vacancy
Documents/Forms
Sorry, there are no items
Access Public Procurement Website
Survey
Start Now
Poll- Test
Useful Links
Ministry of Public Infrastructure, National Development Unit, Land Transport and Shipping
Public Procurement Office
Central Procurement Office
Mauritius Standards Bureau
Central Statistics Office
Council of Registered Professional Engineers Mauritius
Vision, Mission and Values Statements
Vision – our future aims
A Mauritian construction industry with a marked contribution to economic growth and sustainable development and which delivers to an international standard.
Read More


cidb
development through partnership
construction industry development board
home
about the cidb
construction registers
procurement and delivery management
contractor development
industry performance
construction contact centres
publications
news and events
tenders for cidb
contact us
site index
The cidb was established to provide leadership to stakeholders and to stimulate sustainable growth, reform and improvement of the construction sector for effective delivery and the industry's enhanced role in the country's economy.
cidb 2013 Provincial Stakeholder Liaison Meetings Scheduled
The cidb annual drive to engage provincial stakeholders in open dialogue on construction challenges has begun. The 2013 Provincial Stakeholder Liaison meetings include the cidb Board and senior executives, key public sector clients, municipalities, contractors and professional associations, financiers, contractor development agencies and other construction stakeholders. The meetings, which are held in all nine provinces aim to encourage dialogue around industry challenges and the cidb mandate and its programmes. Inputs gathered will also feed into the cidb National Stakeholder Forum's agenda.
Congratulations and Welcome to the New Public Works Director General!
The Board, executive and staff of the cidb welcome Mr Mziwonke Dlabantu to the position of Director General in the Department of Public Works. Mr Dlabantu assumed his new position on 15 January 2013 after the December confirmation of his position by Cabinet. The cidb looks forward to working with him in our strive to transform and improve the construction industry's contribution to South Africa's economy and society.
Season's Greetings
As the Holiday Season is upon us, we reflect on the past year and on those who have
cidb news alerts
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List of active contractors
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Application forms
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Tender opportunities
Advertise or award a tender
List of active projects
Register as an employer
Employer login
recent cidb publications
Subcontracting in the South African Construction Industry: Opportunities for Development


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CONSULTANT & AGENCY
CIDB
OTHERS
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3 (Selasa)
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Tarikh Tutup Permohonan : 2 April 2013
Industrialised Building System Center
Tender
Training & Accreditation
Status Of Registration
Contractor Search
CALENDAR & EVENTS
<< April 2013 >>
Su Mo Tu We Th Fr Sa
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
All List Of Event
Online Services Statistics
NEWS
ANNOUNCEMENT
HIGHLIGHTS
PETALING JAYA: Contractors need to walk the talk wh
A Critical View of Value Management and Whole
April 1, 2013 | FM Link
Why more than life cycle costing is necessary to analyz
DOSH to meet contractors over safety
April 1, 2013 | The Star Online
PETALING JAYA: The Department of Occupational Saf
Construction: Possible bottom fishing after the

Vision: To create a reliable and globally competitive construction industry for Sri Lanka.

Mission: To ensure dynamic, professional, and reliable value added services to the nation, through regulation and facilitation of the development of construction industry resources and promotion of quality standards, to meet local and global requirements for sustainable national development.

> About CIC > Corporate Profile > Functions of CIC

FUNCTIONS OF CIC

FUNCTIONS OF CIC

The functions of the Construction Industry Council are -

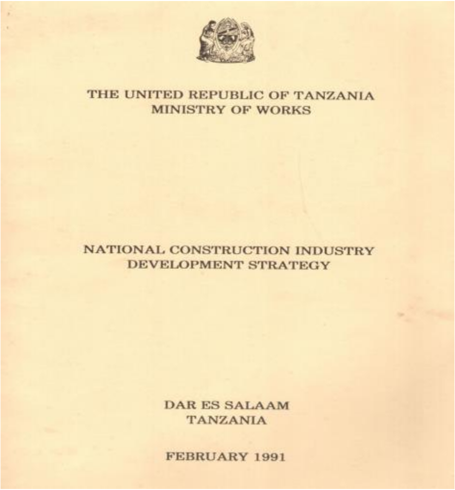
(a)	to advise and make recommendations to the Government on strategic matters, major policies and legislative proposals, that may affect or are connected with the construction industry, and on matters of concern to the construction industry;
(b)	to reflect to the Government the construction industry's needs and aspirations;
(c)	to elevate the quality and competitiveness of the construction industry by promoting the ongoing development and improvement of the industry;
(d)	to uphold professionalism and integrity within the construction industry by promoting self-regulation, formulating codes of conduct and enforcing such codes;
(e)	to improve the performance of persons connected with the construction industry through establishing or administering registration schemes or rating schemes;
(f)	to advance the skills of personnel in the construction industry through planning, promotion, supervision, provision or coordination of training courses or programmes;
(g)	to encourage research activities and the use of innovative techniques and to establish or promote the establishment of standards for the construction industry;
(h)	to promote good practices in the construction industry in relation to dispute resolution, environmental protection, multi-layer subcontracting, occupational safety and health, procurement methods, project management and supervision, sustainable construction and other areas conducive to improving construction quality;
(i)	to enhance the cohesiveness of the construction industry by promoting harmonious labour relations and the observance of statutory requirements relating to employment, and by facilitating communication among various sectors of the industry;
(j)	to serve as a resource centre for the sharing of knowledge and experience within the construction industry;
(k)	to assess improvements made by the construction industry through the compilation of performance indicators;
(l)	to make reommendations with respect to the rate of the levy imposed under this Ordinance;

TOP

CONSTRUCTION
INDUSTRY COUNCIL
建造業議會

VISION
To drive for unity and excellence of the construction industry of Hong Kong.

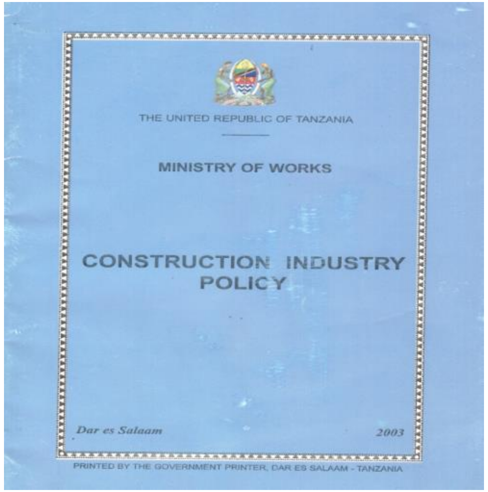
MISSION
To strengthen the sustainability of the construction industry in Hong Kong by providing a communications platform, striving for continuous improvement, increasing awareness of health and safety, as well as improving skills development.


THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WORKS

NATIONAL CONSTRUCTION INDUSTRY
DEVELOPMENT STRATEGY

DAR ES SALAAM
TANZANIA

FEBRUARY 1991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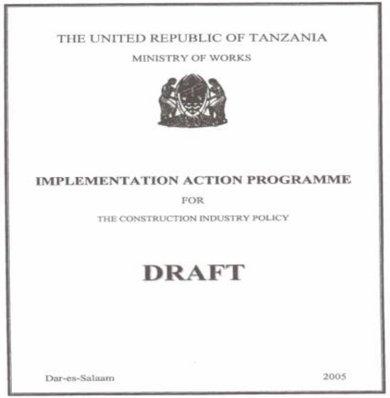
MINISTRY OF WORKS

CONSTRUCTION INDUSTRY
POLICY

Dar es Salaam *2003*

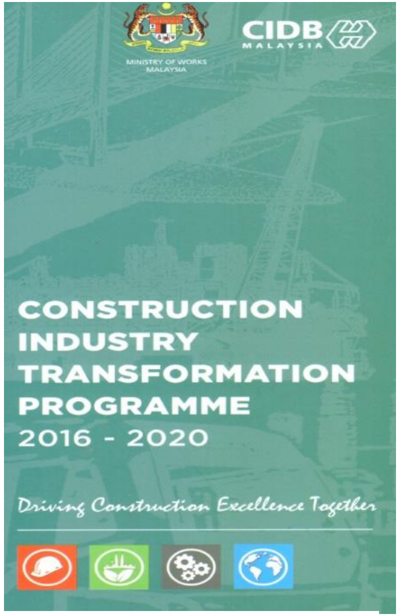
PRINTED BY THE GOVERNMENT PRINTER, DAR ES SALAAM - TANZANIA


THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF WORKS

IMPLEMENTATION ACTION PROGRAMME
FOR
THE CONSTRUCTION INDUSTRY POLICY

DRAFT

Dar-es-Salaam 2005


MINISTRY OF WORKS
MALAYSIA

CIDB
MALAYSIA

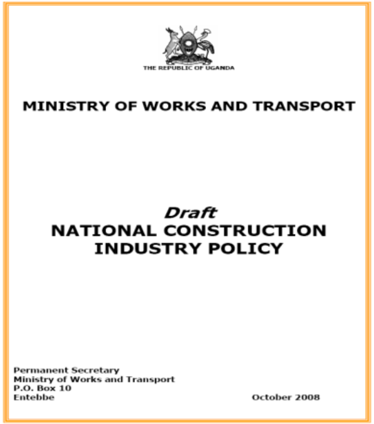
CONSTRUCTION
INDUSTRY
TRANSFORMATION
PROGRAMME
2016 - 2020

Driving Construction Excellence Together


Building for
The Future

The Scottish
Construction
Industry's
Strategy
2013-2016

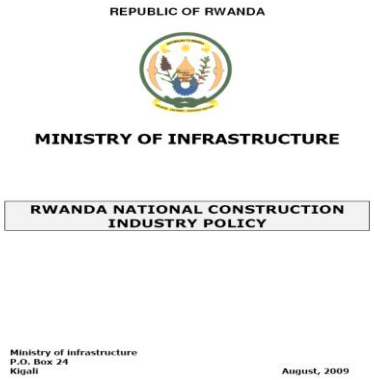
CONSTRUCTION
SCOTLAND


THE REPUBLIC OF UGANDA

MINISTRY OF WORKS AND TRANSPORT

Draft
NATIONAL CONSTRUCTION
INDUSTRY POLICY

Permanent Secretary
Ministry of Works and Transport
P.O. Box 10
Entebbe October 2008


REPUBLIC OF RWANDA

MINISTRY OF INFRASTRUCTURE

RWANDA NATIONAL CONSTRUCTION
INDUSTRY POLICY

Ministry of infrastructure
P.O. Box 24
Kigali August, 2009


Construction
2020

A Strategy for a Renewed
Construction Sector

May 2014

W107 - Construction in Developing Countries
Research Roadmap Report for Consultation
Publication 413
International Council for Research and Innovation in Building and Construction
NEW
EDITED BY
OFORI
Spon Press

Firm	Current condition	Future
		Sell out of RSA
		Unknown
		Sell
		As Concor?
		More cross-border
		Strong overseas
		Unknown
Liviano	In business rescue, trying to secure bridging loans	Unknown
NMC	Liquidated	Gone

Hindle, B. (2018) Did they fall or were they pushed? Going, going … South Africa is losing its big construction companies. Moneyweb, 31 August, https://www.moneyweb.co.za/news/south-africa/did-they-fall-or-were-they-pushed/

Construction Capacity Framework

A country's construction industry is responsible for much of the critical infrastructure that underpins human well-being and economic growth. However, the reality is that in many countries there are limitations in capacity (of people

Example of Framework Analysis

Pillars	Elements	Considerations	What does "good" look like?
People & Organisations (continued)	Institutions & Associations	Statutory Agencies	Statutory agencies, professional institutions, trade associations, and academic and training institutions play a critical support role in providing adequate skills and capacity to the client, consultant and contractor bodies, and provide technical oversight and quality assurance. They also have an important role in communicating information to the general public, as well as setting and upholding standards of conduct and practice, especially for environmental and social safeguarding (e.g. reducing risk of exploitation and child labour). In some cases, construction industry agencies exist to manage and develop the construction industry.
		Professional Institutions	
		Trade Associations & Unions	
		Academic & Training Institutions	

Illustrative questions to understand current practice

How well defined is the role of each of the statutory agencies in administering aspects of construction such as providing quality assurance checks and approvals, and health, safety, environmental, and social risk management?

Are there professional institutions for architectural, engineering, construction, project management, financial, and legal professions? Do they have accreditation schemes which are benchmarked or affiliated with international best practice?

Have the unions been advocating for decent work5 for the construction labour force (a fair income, productive work, safe work, secure employment, prospects for personal development and social integration, and equal treatment for men and women)?

Can academic and training institutions provide sufficient numbers of personnel at all levels (trade, supervisory, technician, graduate, and professional)?

ICE

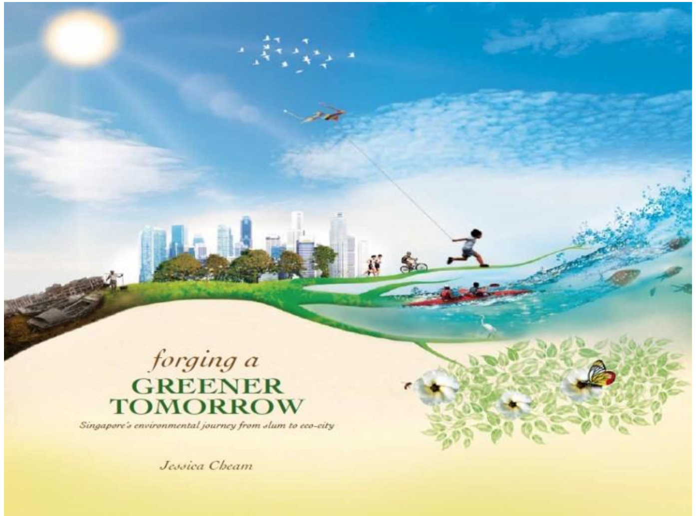
What does a 'good' construction industry look like?

- No complete model, but most countries appreciate need for improvement, want progress. Possible elements…
  - construction industry policy with provision for periodic review
  - industry development agency
  - building control agency
  - infrastructure plan (beyond major projects) -- to provide basis for industry planning and capacity building
  - industry umbrella organisation for private sector
  - stakeholder forum, public-private forum and platform ...a common agenda
  - peer review of industry development periodically
  - setting targets, benchmarking with the best around the world, and in context
  - state of the industry studies, reports periodically.

Goals of industry development in Ghana

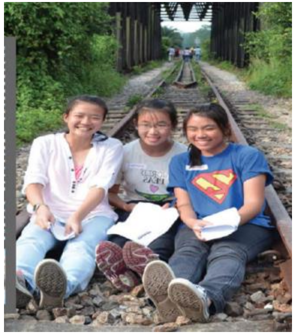
Capacity, capability of industry should be enhanced to enable it…

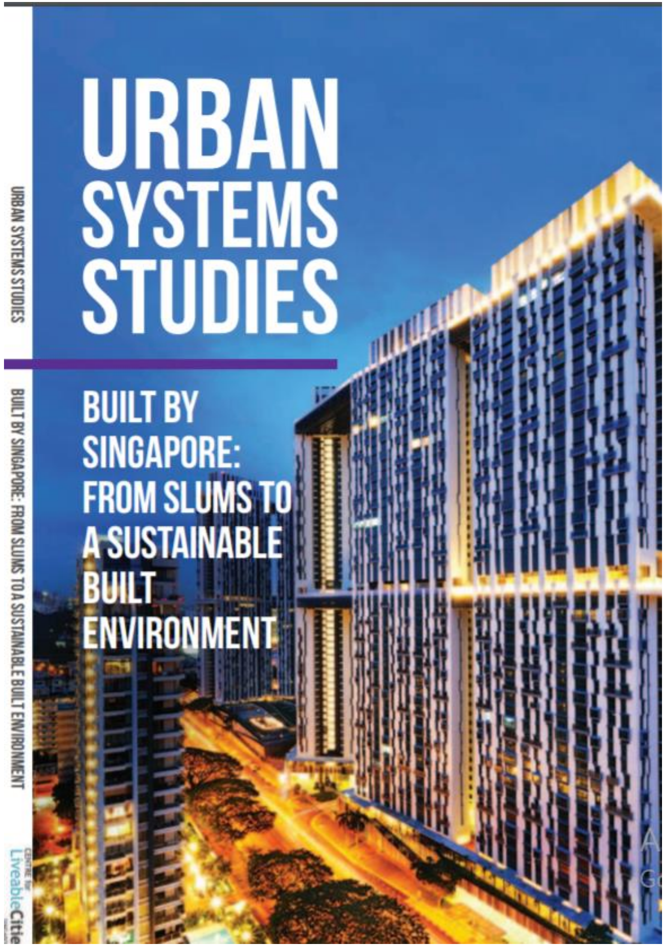
- to deliver a higher volume of output to address SDG shortfalls
- to meet increased demand from initiatives to realise SDGs
- to design with consideration of culture, climate, etc
- to deliver in a cost effective, time efficient manner
- to produce to a high quality, durability
- to provide jobs, ensure welfare of workers and neighbours
- to recognise sustainability issues: environmental, social, economic
- to deliver overall value for money for society


forging a
GREENER
TOMORROW
Singapore's environmental journey from slum to eco-city
Jessica Cheam

skyline

Source: URA, 2012





Today, despite having one of the most densely-built urban environments, Singaporeans live and work in modern buildings that have quality design and high safety standards. Such a world-class built environment did not happen by chance – it is the result of the collective efforts of our developers, architects, builders, engineers and property owners. However, to continue staying ahead of the game, there is still much to be done.

First, concerted engagement of all stakeholders will continue to be the key to ensuring that the formulation of plans for the way forward gives due consideration to the needs and concerns of the different groups. Second, it is vital that we attract new blood into the built environment industry… By continuing to invest in local capability, and to rethink and revitalise the industry, we hope more young engineers will look forward to building a career in this sector. Last but not least, there is a critical need to re-examine and improve the way we build so that processes become more efficient and less labour-intensive. Measures such as enhancing the quality of the construction workforce, encouraging adoption of labour-saving technology, and supporting capability building and manpower development amongst local builders will all contribute towards building up the long-term sustainability and resilience of the built environment sector.


Build SMART
Build EFFICIENTLY
Build GREEN
Building and Construction Authority
We shape a safe, high quality, sustainable and friendly built environment.
How can we transform the built environment sector together?

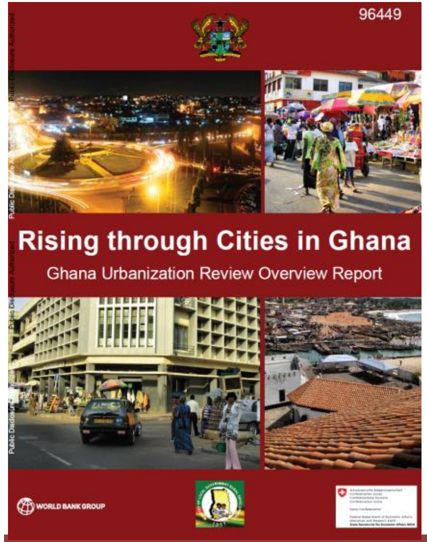
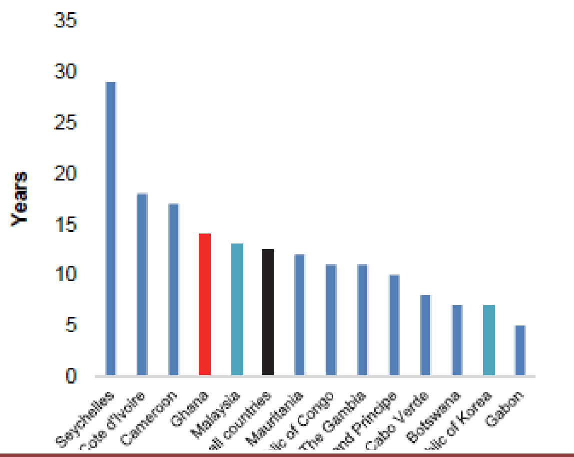


Figure 7. Growth from 40% urban to 50% urban, 1990–2013 (years)



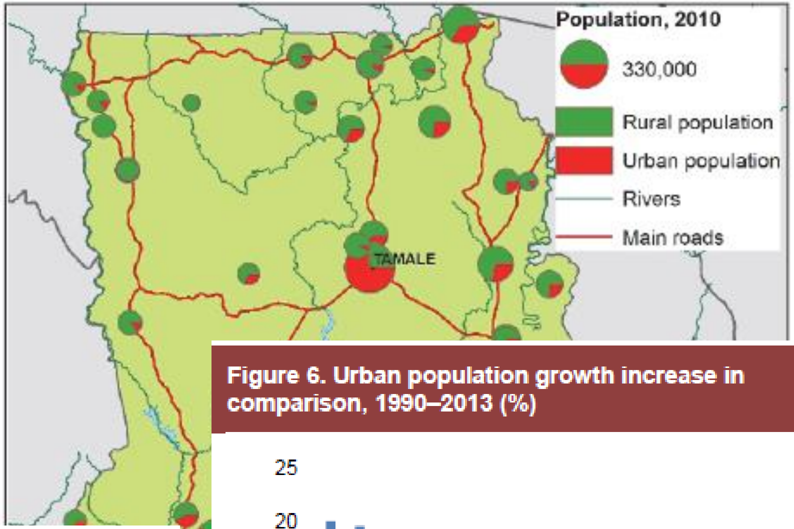
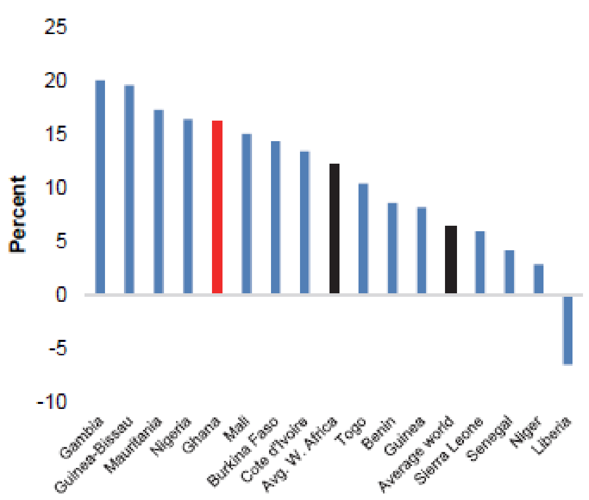


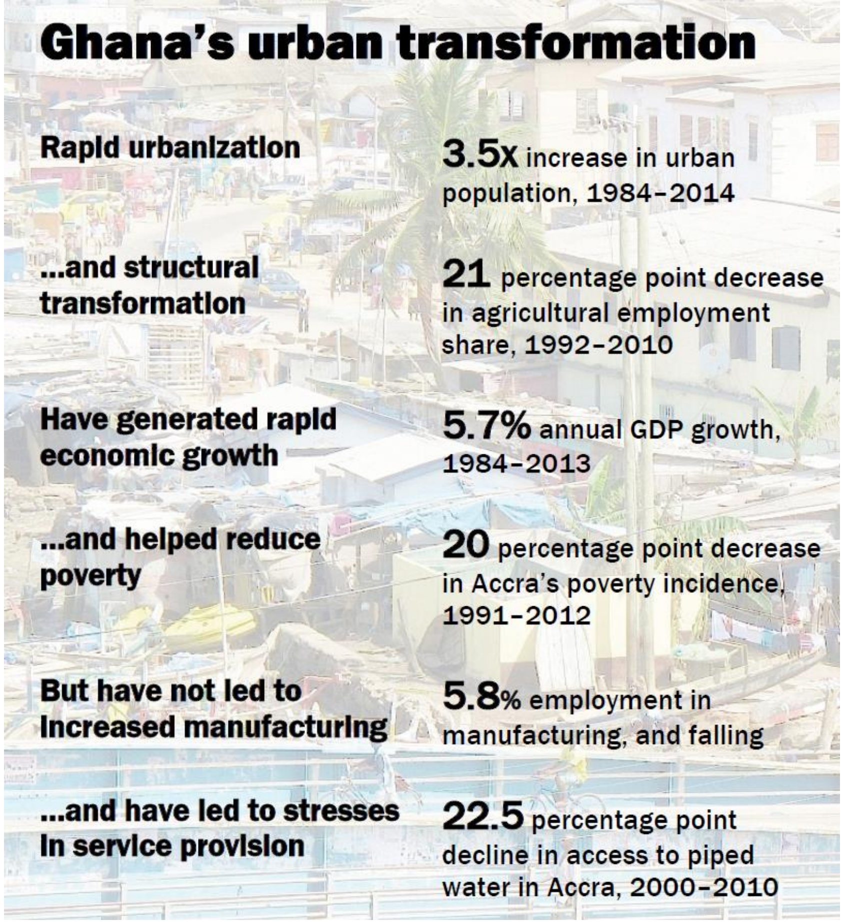
Figure 6. Urban population growth increase in comparison, 1990–2013 (%)



Sources: WDI; World Bank staff calculations.

Table 3. A framework to analyze Ghana's urbanization challenges

Challenge Factor	Efficiency	Inclusion
Land market friction	Impedes new business development and construction; prevents agglomeration economies	Leads to unaffordable housing and weak land rights
Poor transport connectivity	Prevents workers, firms, and materials from locating to most efficient locations; prevents agglomeration effects	Weakens capacity for distribution of basic urban services
Insufficient financing	Prevents the efficient development of connective infrastructure	Inhibits the provision of basic urban services
Weak institutions	Impedes coordination and sufficient financing	Leads to overlap and repetition in the administration of service provision



- *Land markets.* Ghana requires stronger land use management and planning in urban areas.
- *Urban connectivity.* Transport improvements are required to connect markets, boost factor mobility, and help modernise Ghana's urban economies.
- *Financing.* Improved land use planning and transport connectivity require new sources of finance, as current investment in urban sector and existing revenues fall far short of needs.
- *Institutional coordination.* Underlying Ghana's urban land market friction, poor transport connectivity, and insufficient financing is weak institutional capacity and coordination. Ghana should improve inter-jurisdictional coordination, complete decentralization reforms, and further develop public-private partnerships (PPPs).

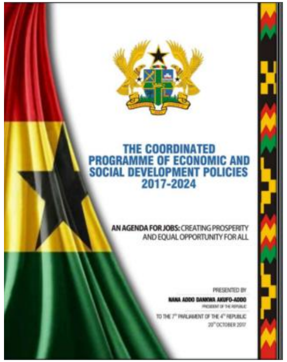
Table 2.4: Post-Harvest Losses of Selected Crops, 2008-2015 (%)

Year	2008	2009	2010	2011	2012	2013	2014	2015
Maize	18.25	17.79	17.35	16.91	16.49	16.08	15.68	15.29
Rice	5.54	5.40	5.27	5.14	5.01	4.88	4.76	4.64
Sorghum	7.68	7.49	7.30	7.11	6.93	6.76	6.59	6.43
Cassava	25.46	24.82	24.20	23.60	23.01	22.44	21.88	21.33
Yam	21.96	21.41	20.87	20.35	19.84	19.34	18.86	18.39
Fish (Marine)	31.79	30.99	30.22	29.46	28.72	28.00	27.30	26.61
Fish(Artisanal)	31.10	31.90	30.20	29.46	28.82	28.10	27.39	26.70

Source: NDPC, 2015 Annual Progress Report, 2016

Current state of sanitation, particularly in urban areas:

- 15% of population has access to improved sanitation
- about 20% of population practise open defecation
- in major towns, cities, 22% of solid waste, 97% liquid waste not properly disposed of.



Score card report for three infrastructure sectors in Ghana

Areas of assessment	*Roads and Bridges*		*Electrical Power*		*Potable Water*	
	Score	Grade	Score	Grade	Score	Grade
Capacity	3.09	D2	3.37	D1	3.07	D2
condition	2.84	D3	3.25	D1	2.9	D3
Funding	2.52	D3	2.86	D3	2.60	D3
Future Need	2.61	D3	2.90	D3	2.72	D3
Operation & Maintenance	2.93	D2	3.16	D2	2.77	D3
Public Safety	2.76	D3	2.96	D2	2.80	D3
Resilience	2.79	D3	3.09	D2	2.76	D3
Innovation	2.76	D3	3.01	D2	2.71	D3
Average	2.79	D3	3.07	D2	2.78	D3
Overall Cumulative Score	**2.89 D3**					

Source: Ghana Institution of Engineers, 2016

GOVERNMENT HOLDS VALUE FOR MONEY CONFERENCE IN ACCRA

At Value-for-Money Conference in Accra, Dr Mahamudu Bawumia, Vice President, urged stakeholders in construction industry value chain to undertake comprehensive value-for-money analysis and develop and propose strategies to help end inflated government contracts.

Review of contracts revealed vast disparity in cost of projects by private sector and government. Government contracts were often several times higher than private sector. While it was imperative government sought suitable investment opportunities to meet the infrastructure gap, government should take steps to ensure cost efficient program design and delivery to reduce financial wastage and protect the public purse.

World Bank estimates: on average, Ghana invested US$1.2bn per year in infrastructure projects while Africa Infrastructure Diagnostic Report in 2010 also identified that US$1.1bn was lost each year in Ghana on infrastructure projects due to project delivery inefficiencies.

At a meeting of the EMT, it emerged that Ghana constructed 60-80-bed district hospitals for US$25 million (excludes tax exemptions on equipment imported for hospitals) while African Development Bank built a 150-bed hospital in Accra for US$1.3 million without equipment. "Even if we have to equip this hospital for some US$1million, the total cost cannot get to more than $3 million."

Participants should propose solutions that would influence government policy on procurement and construction to prevent waste of taxpayer and donor funds.

Committee of key stakeholders would soon be put together to draw up cost and specification standards to guide government procurement and construction.

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/media-center/news/4794-government-holds-value-for-money-conference-in-accra

UPPER WEST REGION CHIEFS COMMEND PRESIDENT AKUFO-ADDO FOR IMPLEMENTATION OF CAMPAIGN PROMISES

July 25, 2018

Chiefs from Upper West Region have commended President Nana Addo Dankwa Akufo-Addo for implementing his manifesto promises and pro-poor policies office to better the lives of the citizenry.

"They include the 1 district, 1 factory; 1 village, 1 dam; Free SHS; Planting for Food and Jobs policies and also creating employment for youth through Nation Builders Corps…".

Upgrade of Lawra, Jirapa, Tumu districts into municipalities deepens decentralisation, brings governance closer to the people.

"It was a timely move, …they will serve as growth poles to propel development within our corridor and, further, pull along surrounding districts socio-economically."

Chiefs appealed to government to construct Hamile-Nandom-Lawra, Han-Zilli-Gwollu, Wa-Tumu-Jefesi, Hamile-Tumu, and Jirapa-Nandom roads to open up region and facilitate transportation of farm produce to markets. Construction of these roads would trigger social, economic transformation of the region.

Naa Puowele Karbo III: although they appreciated challenges confronting government, they appeal to government for construction of these roads into 1st class roads for improved accessibility, which would promote commercial activities.

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/media-center/news/4889-upper-west-region-chiefs-commend-president-akufo-addo-for-implementation-of-campaign-promises)

Government of Ghana

MINISTRY OF WATER RESOURCES,
WORKS AND HOUSING

NATIONAL HOUSING POLICY

2015

"It is a widely accepted fact that every person has the right to live in dignity and in habitable circumstances. Whilst recognizing the right of the individual to choose their own housing needs, people should also be able to access and leverage resources on a collective basis. Therefore the right to housing for all will be vigorously promoted."
Hon. Alhaji Collins Dauda, Minister for Water Resources, Works and Housing

- At preferred threshold of 2 persons per room, stock of 4 million new rooms required for additional households between 2000 and 2010.
- This includes existing shortfall of 1.7 million rooms as at 2000.
- Additional 3.2 million rooms will be needed to keep up with population growth by 2020.
- Thus, by maximum occupancy of 2 persons per room, total 7.2 million extra rooms required by 2020 to be able to address the deficit and accommodate new households.
- However, assuming 1.5 million estimated supply in 2000-10, number of rooms required during the next decade reduces to 5.7 million at occupancy threshold of 2 persons per room.

"In this respect, the main goal of the housing policy is:
* To provide adequate, decent and affordable housing that is accessible to satisfy the needs of all people living in Ghana;
* To ensure that housing is designed and built to sustainable building principles leading to the creation of green communities;
* To ensure that there is participation of all stakeholders in decision-making on housing development and allocation in their localities; and
* To ensure adequate and sustainable funding for the supply of diverse mix of housing in all localities." (p. 14)

"The constraints against the nation's ability and capacity to resolve the housing crisis are many. On the supply side the factors include:

- Land cost and accessibility;
- Lack of access to credit;
- High cost of building materials;
- Outdated building codes and standards; and
- Lack of effective regulatory and monitoring mechanisms.

"On the demand side, it is basically affordability in the face of general low level of incomes of the people."

PRESIDENT AKUFO-ADDO CUTS SOD FOR KUMASI ROADS FACELIFT PROJECT

August 10, 2018

President Nana Addo Dankwa Akufo-Addo cut
260 kilometre project, funded by Government
Agency, will ensure revamp of roads in Kumas
Project will include, rehabilitation of 100km of ... on
of 100km of highways and feeder roads in Ash
Project also involves remodelling 4 roundabou
on 135km of roads.

President Akufo-Addo (right) in handshake with Asantehene, Otumfuo Osei Tutu II, prior to the ground breaking ceremony

President Akufo-Addo said the current state o ... 's 2nd largest city.

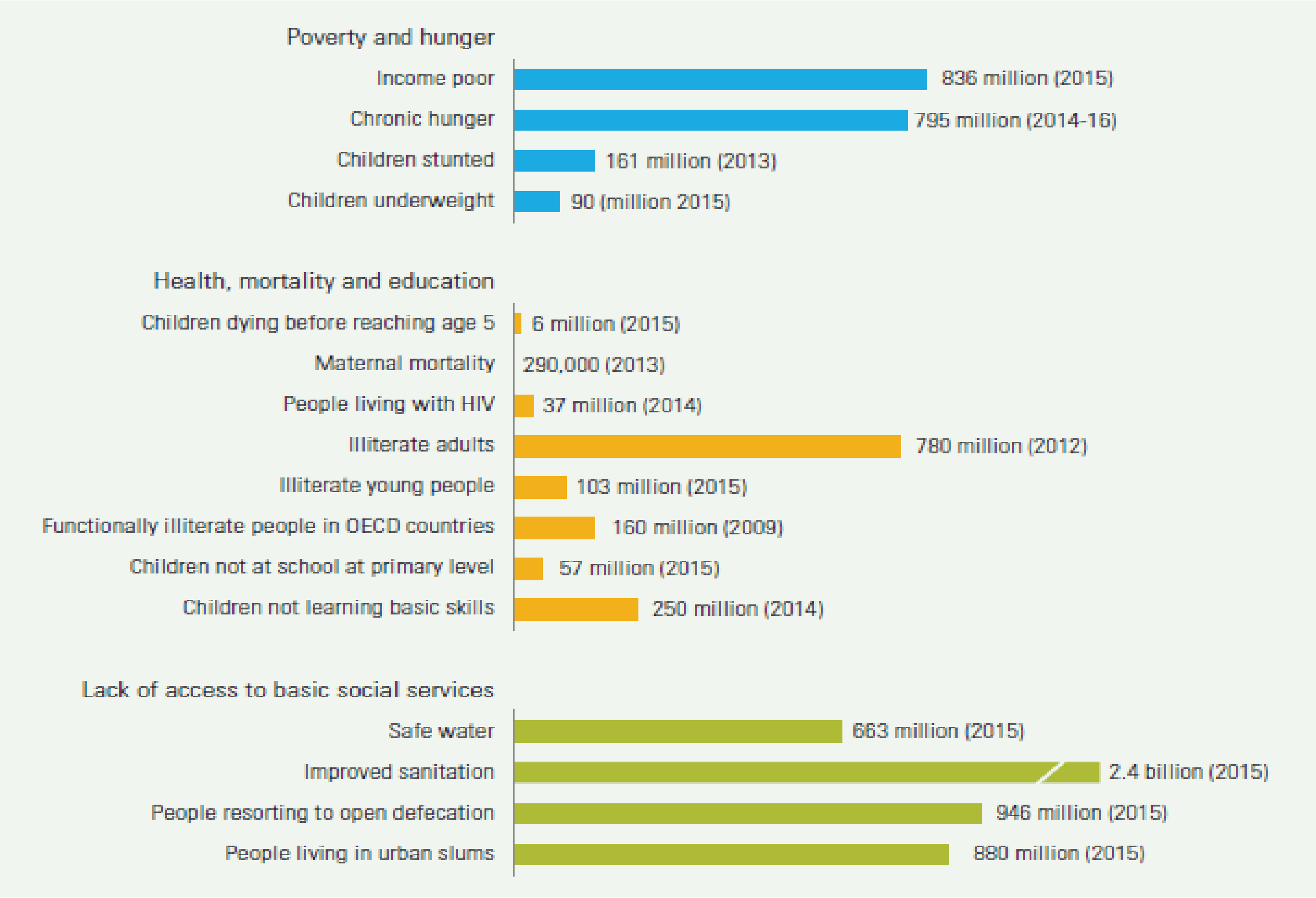
President: the road projects represented exciting times in infrastructural development, not only of Asanteman, but also the entire country; urged Ministry of Roads and Highways and its implementing agencies to ensure adequate and proper supervision was given to the project to derive value for money.

He appealed to all whose properties might be affected by the projects to co-operate with Ministry of Roads and Highways and other state institutions in accessing compensation due them; gave assurance that fair, adequate compensation would be paid to all affected.

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/news/4934-president-akufo-addo-cut-sod-for-kumasi-roads-facelift-project

Extent of human deprivations in the world



Source: UN 2015b; UNAIDS 2015; UNESCO 2013a, 2014.

(UNDP, 2015)

Strengths

1. Availability of basic local building materials (such as on sand, stone, blocks) reduces cost
2. Most artisans are trained in use of local building materials
3. Strong long-term economic fundamentals
4. Increasing willingness of the youth to work in construction
5. Increasing numbers of strong local construction companies
6. Strong professional institutions

Opportunities

1. Government is willing to engage industry to improve industry
2. Several local, foreign firms, parastatals have become real estate developers
3. Significant numbers of professionals and technicians being educated, trained
4. Large pool of skilled artisans ready for employment
5. Possibility of technology transfer from foreign firms
6. Government has infrastructure development and rural industrialisation agenda
7. Booming real estate sector
8. Existence of institutions offering capacity building
9. Availability of institutions providing finance
10. PPP policy launched; infrastructure fund set up

SWOT analysis of construction industry in Ghana, 2017

Weaknesses

1. Winning of local materials such as sand and stone creates environmental problems because of poor management
2. Most artisans trained through apprenticeships; do not have high levels of education
3. There is need for much site supervision
4. Inadequate equipment and technological base
5. Lack of cohesion among stakeholders
6. Low level of ICT application; BIM not applied

Threats

1. Little systematic collection, effective dissemination of information
2. Politics interferes with implementation of plans to improve efficiency of construction industry
3. Cumbersome permit process increases building costs
4. Absence of regulatory agency for construction industry
5. Government's preference of foreign contractors to indigenous companies
6. Strong competition from foreign firms with advanced technology
7. Outdated building code, other building regulations affects standards of work, output
8. Delays in payment for work by government
9. Need for urgent technological upgrading of industry.

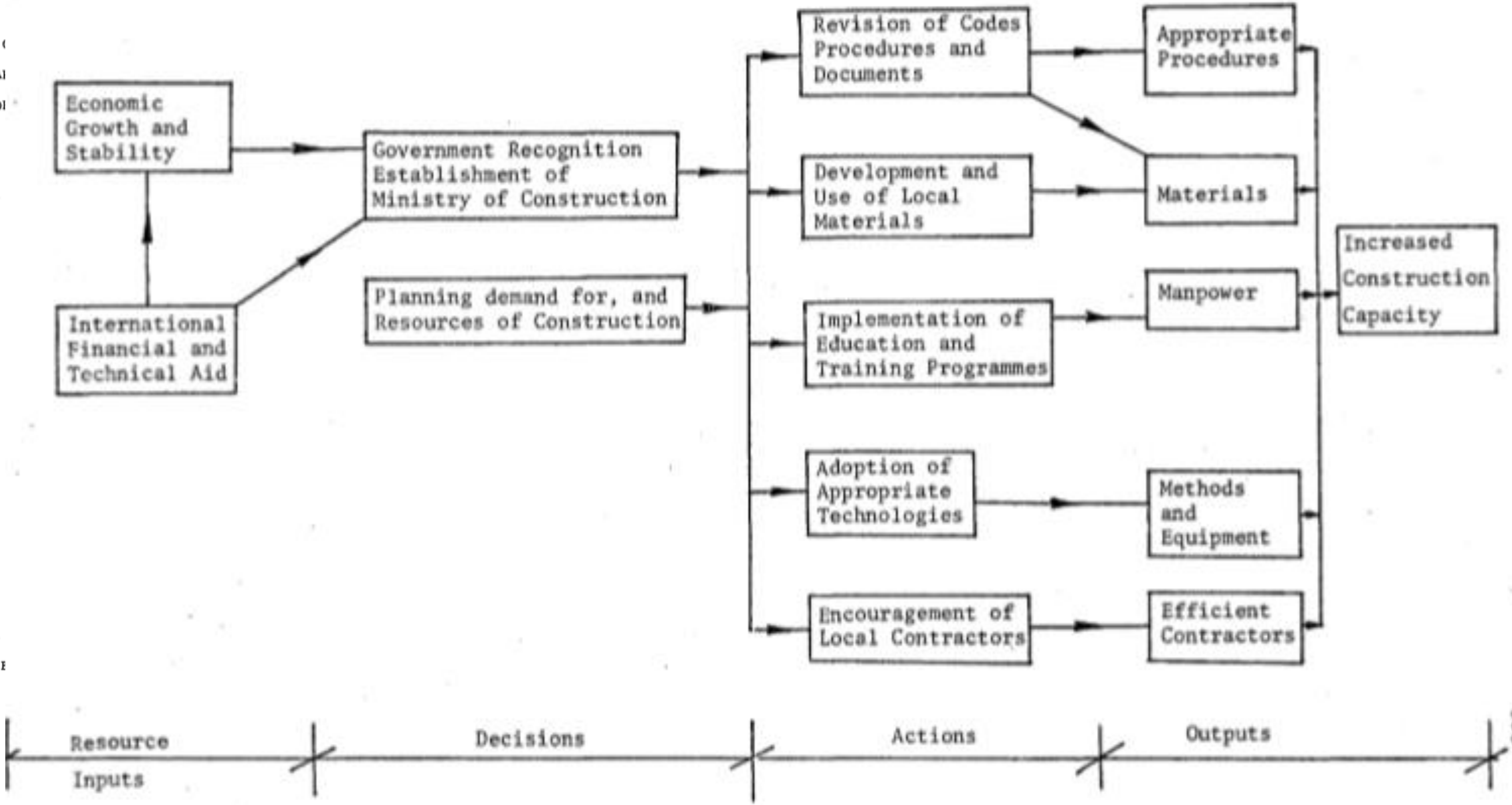
SWOT analysis of construction industry in Ghana, 2017

Ghana construction industry timeline

- Ministry of Works and Housing
- Public Works Department, 1850
- Tema Development Corporation, 1952
- State Housing Corporation, 1956
- Ghana National Construction Corporation, 1960?
- GNCC into PWD and State Construction Corporation, 1966
- Bank for Housing and Construction, 1973
- Residual PWD, Architectural and Engineering Services and Ghana Highway Authority, 1973 (GHA began operating in 1974)
- Hydraulic Division of PWD merged with Department of Rural Water Development to become Water Supplies Division, later Ghana Water and Sewerage Corporation
- Department of Feeder Roads, 1983
- Department of Urban Roads, 1984
- Ministry of Roads and Highways, 1997

- Ghana Investment and Infrastructure Fund, 2014
- Ministry of Railways Development, 2017
- Ministry of Sanitation and Water Resources, 2017.

FIGURE 5.1. Schematic Diagram of the Synthesis of Current Strategies for Developing Construction



- The most comprehensive attempt to plan the development of the construction industry's resources was made in the current plan (1975/76 to 1979/80).

- Standardisation of building components would be pursued; attempts would be made to reduce building costs.
- Government would seek the "...expansion and rehabilitation of existing building materials industry ... encouragement of research into new materials through dissemination of research findings through (regional information centres and the effective regulation of building materials distribution."

A programme for training was formulated. This would involve:

- "...an expansion of the programme for artisans and technicians offered at the polytechnics...at other technical institutes... (and) increases in the intake of...professional categories (p. 225).

For local contractors, aim was to increase:

- "...contracting capacity by encouraging professional personnel to enter... the industry while efforts will be made to improve the managerial and technical competence of existing contractors" (p. 225).

On regulatory framework,

- "...policies and strategies to streamline and strengthen the physical planning system (and) revision of the national building code...to allow for the use of local building materials" (p. 225).

TABLE 8.1: Five Year Development Plan (1975-80) - Production Targets for Selected Building Materials

Material	Unit	Estimated Production 1975	Production Targets				
			1976	1977	1978	1979	1980
Cement	Tons	550,000	600,000	660,000	700,000	750,000	800,000
Pipes	Tons	26,000	30,000	40,000	50,000	60,000	60,000
Roofing Sheets	Tons	50,000	55,000	60,000	80,000	80,000	80,000
Burnt Bricks	Pieces	1,000,000	10,000,000	18,000,000	20,000,000	20,000,000	20,000,000
Wall Tiles	Pieces	40,000	48,000	58,000	75,000	80,000	80,000
Water Closets	Pieces	10,000	15,000	20,000	25,000	30,000	30,000
Hinges and Doorlocks	Pieces	3,000,000	3,300,000	3,600,000	4,000,000	4,000,000	4,000,000
Window and Door Frames	Pieces	500,000	550,000	600,000	700,000	800,000	800,000
Paint	Gallons	1,000,000	1,200,000	1,400,000	2,000,000	2,000,000	2,000,000

Source: Five-Year Development Plan, 1975/76 - 1979/80.

Production targets for main building materials were set in the plan.

Issues facing Ghana's construction industry in 1951:

- reliance on imported materials
- high cost of building materials
- shortage of skilled labour
- lack of mechanisation in the industry.

In 1975, issues were the same, plus...

- undeveloped state of local building materials and dependence on imported materials
- high cost of construction and land
- obsolete planning legislation and building codes
- ineffective land management systems
- shortage of staff
- lack of co-ordination between institutions established to deal with problems of the industry.

<u>Construction Industry Development</u>

"Strategies to address challenges in the construction industry will begin with the establishment of a central agency to improve efficiency in the industry. This agency will also lead efforts to improve and standardise tech materials used to quality in all asp construction" (p. 9

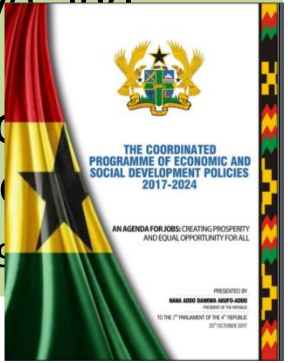


Table 2 Top 20 International contractors, 2004 to 2006

Rank			Firm
2006	2005	2004	
1	1	2	Hochtief AG, Germany
2	2	1	Skanska AB, Sweden
3	4	3	Vinci, France
4	8	8	Strabag SE, Austria
5	6	5	Bouygues, France
6	3	6	KBR, USA
7	5	4	Bechtel, USA
8	12	13	Fluor Corp, USA
9	7	7	TECHNIP, France
10	10	10	Bilfinger Berger AB, Germany
11	9	9	Royal BAM Groep, The Netherlands
12	11	16	Ferrovial, Spain
13	14	12	Bovis Lend Lease, UK
14	13	11	AMEC plc, UK
15	16	15	JGC Corp, Japan
16	15	20	Grupo ACS, Spain
17	18	19	Consolidated Contrctors Int'l Co, Greece
18	27		Chiyoda Corp., Japan
19	24		Balfour Beatty plc, UK
20	17	17	China State Construction Engineering Group, China
27	19	18	Snamprogeti, Italy
23	20	24	Kajima Corp., Japan

Source: *ENR*

ENR rankings: Top 250 Global Contractors

HOCHTIEF

Rank 2017	Rank 2016	Firm	2016 Revenue (US $ m) Total	2016 Revenue (US $ m) Int'l	New Contracts in 2016 (US $ m)
1	1	China State Construction Eng'g			
2	2	China Railway Group Ltd., Beijin			
3	3	China Railway Construction Cor			
4	4	China Communications Constr.			
5	6	Power Construction Corp. Of Ch			
6	5	Vinci, Rueil-Malmaison, France			
7	7	Grupo ACS, Madrid, Spain			
8	8	China Metallurgical Group Corp.			
9	10	Shanghai Construction Group, S			
10	9	Bouygues SA, Paris, France			
11	**	China Energy Engineering Corp.			
12	12	Bechtel, San Francisco, Calif., U			
13	**11**	**HOCHTIEF, Essen, Germany**			
14	**26**	**CIMIC Group Ltd., North Syd**			
15	14	Hyundai Eng'g & Construction C			
16	15	Obayashi Corp., Tokyo, Japan			
17	16	Skanska AB, Stockholm, Swede			
18	18	Fluor Corp., Irving, Texas, U.S.A			
19	19	Kajima Corp., Tokyo, Japan			
20	17	Strabag SE, Vienna, Austria			

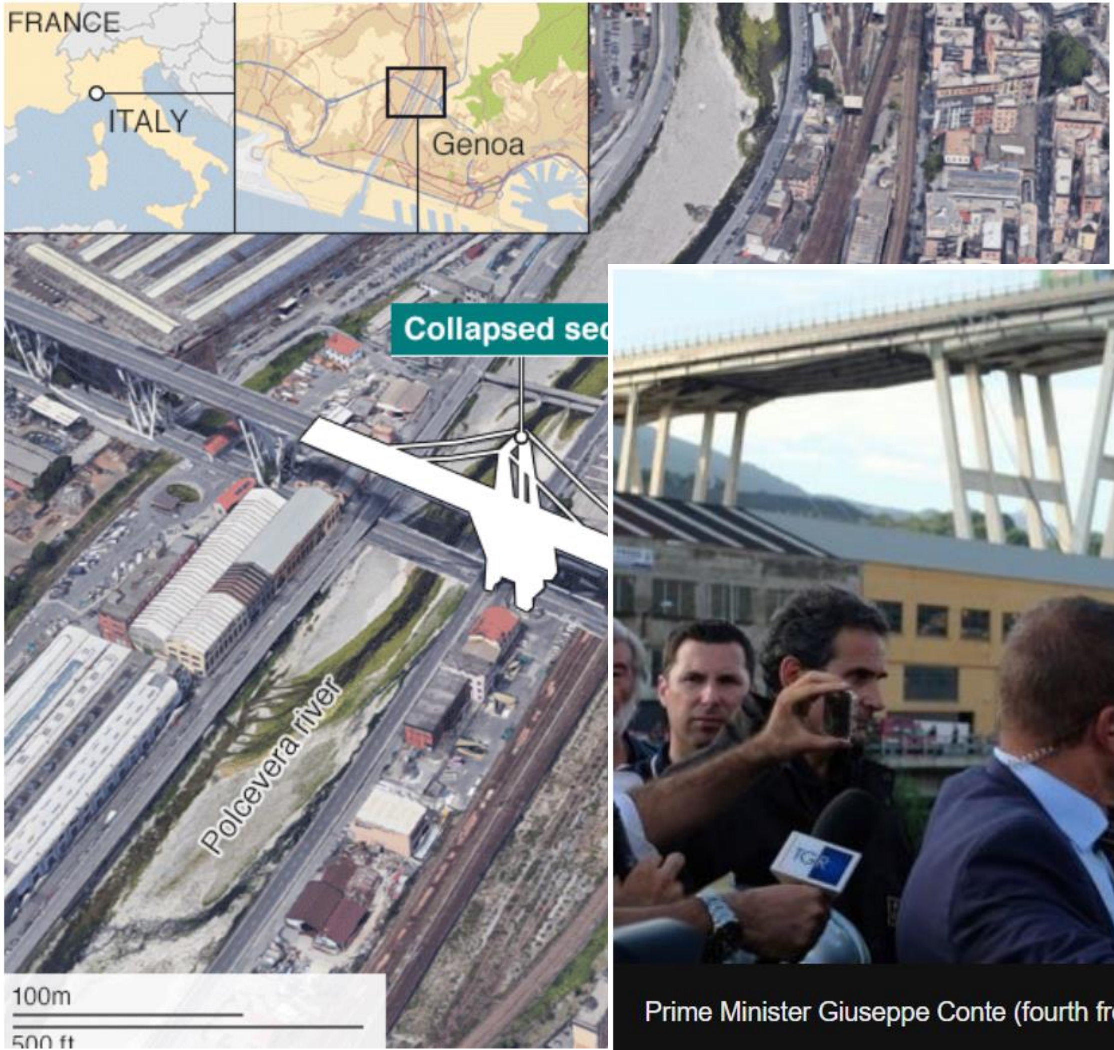
ENR rankings: Top 250 International Contractors

Rank 2017	Rank 2016	Firm	2016 Revenue (US $ m) Int'l	2016 Revenue (US $ m) Total	New Contracts in 2016 (US $ m)
1	1	Grupo ACS, Madrid, Spain†	32,598.2	37,333.9	32,598.2
2	**2**	**HOCHTIEF, Essen, Germany†**	**22,927.0**	**24,022.0**	**25,791.0**
3	3	China Communications Constr. Group Ltd., Beijing, China†	21,201.0	70,780.0	36,784.0
4	4	Vinci, Rueil-Malmaison, France†	17,367.3	42,667.9	16,269.6
5	5	Bechtel, San Francisco, Calif., U.S.A. †	16,406.0	24,251.0	4,437.0
6	9	Bouygues SA, Paris, France†	12,257.0	26,354.0	13,107.0
7	7	Technip, Paris, France†	12,113.0	12,230.0	5,484.0
8	10	Skanska AB, Stockholm, Sweden†	12,110.0	15,414.0	15,680.0
9	8	Strabag SE, Vienna, Austria†	12,008.7	14,220.9	13,202.0
10	11	Power Construction Corp. of China, Beijing, China†	11,595.9	43,324.7	27,751.8
11	14	China State Construction Eng'g Corp. Ltd., Beijing, China	10,358.8	124,656.7	17,163.5
12	12	Saipem, San Donato Milanese, Italy†	8,949.0	9,121.0	324.0
13	16	Ferrovial, Madrid, Spain†	8,943.0	11,834.9	14,939.1
14	13	Hyundai Engineering & Constr. Co. Ltd., Seoul, S. Korea	8,664.0	17,694.5	7,307.4
15	19	Petrofac Ltd., Jersey, Channel Islands, U.K.†	7,070.0	7,070.0	1,265.0
16	15	Fluor Corp., Irving, Texas, U.S.A. †	6,952.0	15,185.9	9,700.0
17	**27**	**CIMIC Group Ltd., North Sydney, NSW, Australia†**	**6,730.6**	**18,180.6**	**8,073.6**
18	25	Salini Impregilo SPA, Milan, Italy	6,249.3	6,779.3	8,693.4
19	21	Consolidated Contractors Group, Athens, Attica, Greece†	6,124.7	6,124.7	3,499.0
20	17	Samsung C&T Corp., Seoul, S. Korea	5,900.0	11,062.0	4,454.0

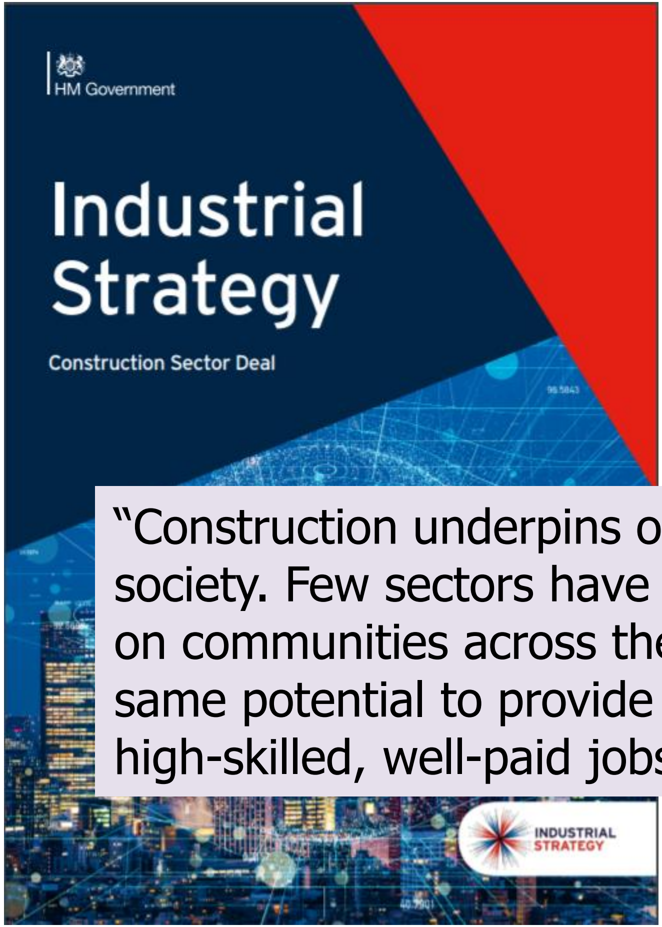
file:///C:/Users/oforig3/Downloads/ENR_Top250_2017.pdf

Images from the kitchen of flat 16 show the positioning of the kitchen appliances and the window.

https://www.bbc.com/news/uk-40301289



Prime Minister Giuseppe Conte (fourth from R) visited the scene of the disaster on Tuesday



"Construction underpins our economy and society. Few sectors have such an impact on communities across the UK or have the same potential to provide large numbers of high-skilled, well-paid jobs."

The life of every person in Britain is affected by the construction sector. It is one of our truly nationwide industries – encompassing individual homes in remote areas and some of the greatest infrastructure projects of our generation, in every corner of the United Kingdom. It is one of our major employers, with around 3.1 million people[1] working in the sector, most of whom are outside London and the South East.

The construction sector has an important role to play in achieving the vision set out in our Industrial Strategy: strengthening the foundations of our economy and achieving the Grand Challenges[2] of putting the UK at the forefront of the AI and data revolution; maximising the advantages from the global shift to clean growth; becoming a world leader in the future of mobility; and meeting the needs of an ageing society.

Ambition for construction sector to deliver:

- Better-performing buildings that are built more quickly and at lower cost;
- Lower energy use and cheaper bills from homes and workplaces;
- Better jobs, including an increase to 25,000 apprenticeships a year by 2020;
- Better value f[…] construction p[…]
- A globally-con[…] global infrastr[…]

Construction Sect[…] sector that delive[…]

- a 33% reduct[…]
- a 50% reduct[…]
- a 50% reduct[…]
- a 50% reduct[…] construction products and materials.

These goals will be met by focusing on three strategic areas:

- Digital techniques deployed at all phases of design will deliver better, more certain results during the construction and operation of buildings, with improved safety, quality, productivity, optimised life-cycle performance
- Offsite manufacturing technologies will help to minimise wastage, inefficiencies, delays in onsite construction
- Whole life asset performance will shift focus from costs of construction to costs of a building across its life cycle, particularly energy use.

What is being done now, and what are their chances of success?

- many laws 'in progress', or announced
- registration councils and professional institutions have widened their 'catchment'
- infrastructure plan, with construction industry development component
- declaration of intention to establish construction industry development agency
- efforts to address housing needs …national housing policy, affordable housing initiatives, houses for service personnel
- movement on railway development programme
- tentative green building initiatives
- advocacy processes on various issues
- greater public interest, desire for involvement
- initiatives by the private sector to form synergistic groups
- Value for Money ‘initiative’ and programme.

MASLOC TO DISBURSE 50 PERCENT OF ITS LOAN PORTFOLIO TOWOMEN

The 2018 Women Entrepreneurship Summit, Accra

Government has directed Microfinance and Small Loans Centre (MASLOC) to disburse 50% of its loans to women to help bridge the gap i
boost their entrepreneurial and economic st
would ensure that 70% of all government-f
contractors, out of which 30% would be aw

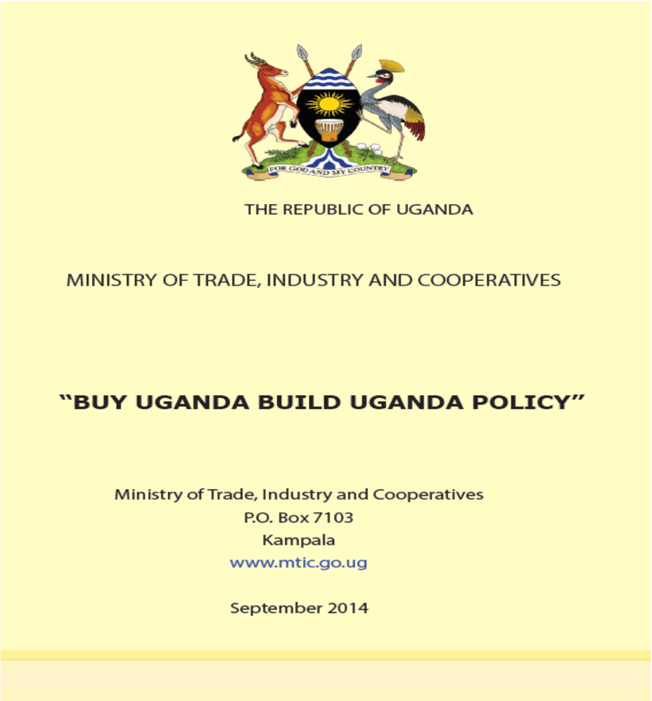

President Akufo-Addo speaking at the closing of 2018 Women Entrepreneurship Summit

On restructuring of National Board for Smal
Ghanaians would shortly see an institution
enterprise development services to MSMEs.
"It will co-ordinate all programmes designe
industrial value chains with market linkages
the Ministry of Trade and Industry, under o
and other industrial initiatives, and by the N
programme for Planting for Food and Jobs".

President noted that over the past decade, the number of women entrepreneurs had increased considerably, "…women entrepreneurs have become an important part of the entrepreneurial landscape, with latest figures from the NBSSI indicating that 44% of Micro, Small and Medium Enterprises (MSMEs) are owned by women".

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/news/4732-masloc-to-disburse-50-percent-of-its-loan-portfolio-to-women


THE REPUBLIC OF UGANDA

MINISTRY OF TRADE, INDUSTRY AND COOPERATIVES

"BUY UGANDA BUILD UGANDA POLICY"

Ministry of Trade, Industry and Cooperatives
P.O. Box 7103
Kampala
www.mtic.go.ug

September 2014

Kenyan PPDA Act 2009

The revised Kenyan PPDA Act 2009 supports the promotion of locally produced goods for instance Article 6(2) gives priority to Kenyan citizens when undertaking bids and tenders. Article 39(1) (2) allows the Minister responsible to prescribe preferences or reservations in public procurement and disposal. Article 39 (8c) provides preference to citizens of Kenya where funding is at 100%.

Tanzanian PPDA

Article 49(1) of the PPDA Act pronounces that potential suppliers or contractors of procurement activities may sometimes be limited on the basis of their nationality.

South Africa's experience

The Proudly South African brand campaign was launched in October 2001 with the goal of encouraging South Africans to buy local. The campaign was based on the idea that boosting consumption of local products by South Africans and those visiting the country would lead to economic transformation and job growth in the country.

PRESIDENT CUTS SOD FOR "1-DISTRICT-1-WAREHOUSE" PROJECT

President Nana Addo Dankwa Akufo-Addo on Wednesday cut sod to begin construction of
warehouse component of Infrastructure for P
Ashanti Region. Purpose of warehouses is to
under "Planting for Food and Jobs" programm
In April 2018, President reinforced governme ity
warehouse in each of the 216 districts – "1-D
Construction of warehouses, under IPEP will
transformation agricultural sector.

President: "IPEP…is to provide each of the 27 n
every year to tackle issues relating to infrastr l
and deprived communities".

President Akufo-Addo laying blocks to begin the construction of the warehouse component of government's Infrastructure for Poverty Eradication Programme at Ejura in the Ashanti Region

Construction of the warehouses in all districts
marketing of agriculture produce, help address poor farm-level practices, poor handling, poor
storage activities that expose farm produce to moulds, rodents, other pests.

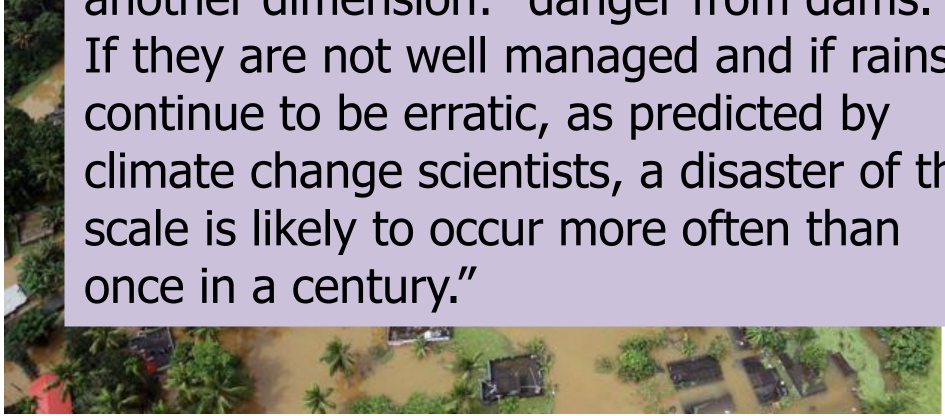
President reinforced Government's commitment to accelerating construction of the warehouses, and will ensure each is fitted with modern equipment, including drying or freezing systems.

With construction of these modern warehouses, President expects private sector to take advantage to set up industries, to complement 1-District-1-Factory initiative.

Source: ISD (Rex Mainoo Yeboah)

http://ghana.gov.gh/index.php/news/4086-president-cuts-sod-for-1-district-1-warehouse-project

Floods in Kerala killed more than 350 people in June-August 2018. Experts say the state should have been prepared for this. In May, a government report had warned that Kerala was not a good performer in effective management of water resources. Floods in Kerala would not have been so severe if authorities had gradually released water from at least 30 dams (on 44 rivers) earlier rather than waiting for dams to be filled up.



Floods in Kerala this time highlighted another dimension: “danger from dams. If they are not well managed and if rains continue to be erratic, as predicted by climate change scientists, a disaster of this scale is likely to occur more often than once in a century.”

Khadka, N.S. (2018) Why the Kerala floods proved so deadly. BBC News, 20 August, https://www.bbc.co.uk/news/world-asia-india-45243868

SEVEN LEVERS TO DRIVE

JUST THE BASICS

RESHAPE REGULATION AND RAISE TRANSPARENCY

- Monitor KPIs across key regulatory areas
- Streamline permitting and approvals processes
- Allocate grants and budgets for innovation and training
- Encourage transparency across the industry and combat informality
- Mandate use of technology (e.g., BIM on all public-sector projects)

REWIRE THE CONTRACTUAL FRAMEWORK

- Negotiate and contract beyond cost for value
- Establish a single source of truth
- Add incentives to traditional contracts
- Prioritize integration and interface management

RETHINK DESIGN AND ENGINEERING PROCESSES AND INCREASE STANDARDIZATION

- Improve design process and outcomes
- Ensure early collaboration from all parties involved in design
- Encourage repeatability of design across projects

IMPROVE PROCUREMENT AND SUPPLY-CHAIN MANAGEMENT

- Use standard procurement tools and levers seen in other sectors
- Invest in a central procurement organization
- Leverage clean sheeting to improve supplier and subcontractor management

IMPROVE ON-SITE EXECUTION IN FOUR KEY WAYS

- Introduce rigorous integrated planning
- Implement collaborative performance management
- Mobilize projects effectively
- Collaborate to reduce waste and variability

INFUSE DIGITAL TECHNOLOGY, NEW MATERIALS, AND ADVANCED AUTOMATION

- Invest in a chief digital/tech/innovation office and team
- Make 3D BIM universal
- Introduce drones and unmanned aerial vehicles for scanning, monitoring, and mapping
- Use digital collaboration and mobility tools on portable devices

RESKILL THE WORKFORCE

- Build an apprenticeship model
- Develop frontline training
- Ensure knowledge retention and management

McKinsey&Company

PRODUCTIVITY IMPROVEMENTS IN THE INDUSTRY

BEYOND THE BASICS

- Shift fully to outcome/productivity-based regulation
- Establish "single-window clearance" approach to optimizing per
- Move from grants to investments in areas such as innovation an
- Combat land fragmentation to drive scale development

- Move to alternative contracting strategies, e.g., IPD
- Invest in up-front planning and scoping, typically with early contr
- Formalize contracting and budget only after estimates are robust

- Design for manufacturing and assembly right from the start
- Institutionalize design to value and constructability reviews in de

- Invest in supply-chain and inventory capabilities to tackle the shi
- Move to digitized procurement-management system, including a supply-chain practices

- Utilize a LPS-based system to ensure effective "milestone-back"
- Develop a single source of truth with a central control tower, use

- Mobilize 5D BIM across the project life cycle, with augmented/m
- Leverage the Internet of Things–enabled fully connected sites (e.
- Implement advanced analytics on project and firmwide data
- Develop alternative and innovative materials
- Implement automation equipment on sites

- Introduce e-enabled microtraining for frontline workers
- Run field and forum—mix of classroom and field-based training
- Create internal academies to institutionalize best practices and r

The productivity opportunity in construction

Construction matters for the world economy

... but has a long record of poor productivity

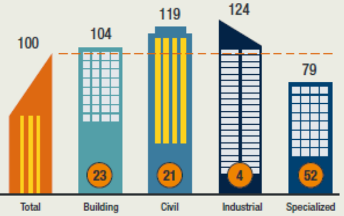
Construction-related spending accounts for **13%** of the world's GDP

...but the sector's annual productivity growth has only increased **1%** over the past 20 years

$1.6 trillion of additional value added could be created through higher productivity, meeting half the world's infrastructure need

Construction is a sector of two halves

Fragmented specialized trades drag down the productivity of the sector as a whole



Action in seven areas can boost sector productivity by 50–60%

- Reshape regulation
- Rewire contracts
- Rethink design
- Improve procurement and supply chain
- Improve onsite execution
- Infuse technology and innovation
- Reskill workers

5–10x productivity boost

possible for some parts of the industry by moving to a manufacturing-style production system

MCKINSEY GLOBAL INSTITUTE

McKinsey&Company

Construction technology future

Thasarathar (2016): emerging trends in construction:

- 3D printing
- the Internet of Things (IoT)
- robotics
- drones
- cloud computing, infinite computing
- reality capture
- augmented reality
- gaming engines
- crowd-funding
- crowd-sourcing
- generative design
- big data
- artificial intelligence, and more.

He suggests: construction is in an era when "change is the new normal", and "having a confident position on the technological future should be just as important to a construction contractor as having a strong balance sheet".

Dubai opens world's first 3D printed office

24 May 2016 | By GCR Staff

3-D printing a bridge in Amsterdam
Source: The Economist, 2015

Daqri helmet integrates 4 cameras to create a 360-degree array

Kunsthaus Graz, a modern art museum

- Designers adopted innovative style known as blobitecture or ‘blob architecture’ to create building’s organic, amoeba-shaped form with ‘spouts’ projecting from the roof.
- Glazed outer skin is constructed from 1,288 iridescent blue acrylic panels.
- Skin generates energy through integrated photovoltaic panels; its environmental impact is very low. Skin also forms a ‘BIX Façade’ screen, capable of displaying interactive media using 900 computer-controlled fluorescent lamps fitted beneath the surface.

http://www.designingbuildings.co.uk/wiki/Kunsthaus_Graz

World’s largest taxi company owns no taxi (Uber)

World’s most popular media owner creates no content (Facebook)

Largest accommodation provider owns no real estate (Airbnb)

World’s largest telephone companies own no telecommunications infrastructure (Skype, WeChat)

Fastest growing banks have no actual money (Society One)

World’s most valuable retailer has no inventory (Alibaba)

World’s largest movie house owns no cinemas (Netflix)

World’s largest software vendors do not write the apps (Apple & Google)

The digital disruption

Many of world’s largest construction companies employ very few site workers

Many of world’s largest construction companies earn more from operating facilities than building

Stakeholders actively participating on projects, via social media … “the unknown stakeholder”

Substitutes for built space emerging, eg. retail habits; office organisation; educational approaches

Consultants’ services being provided for free, eg. market information on property; standard design

Disruption in construction

Ten predictions for 2050

1. The industry will become increasingly focused on innovation and both contractors and customers will become less risk-averse.

2. Shape and offer of infrastructure industry will change significantly, with new business models, products and services.

3. Infrastructure will move on from concrete, steel to include new mate which respond to their surrounding

4. New jobs and industries will be created – some will disappear… low zero skill roles, those with repetitio

5. Thinking only about design and co will become an outdated as infrastru becomes multi-functional.

6. Robots will become more prevalent in construction.

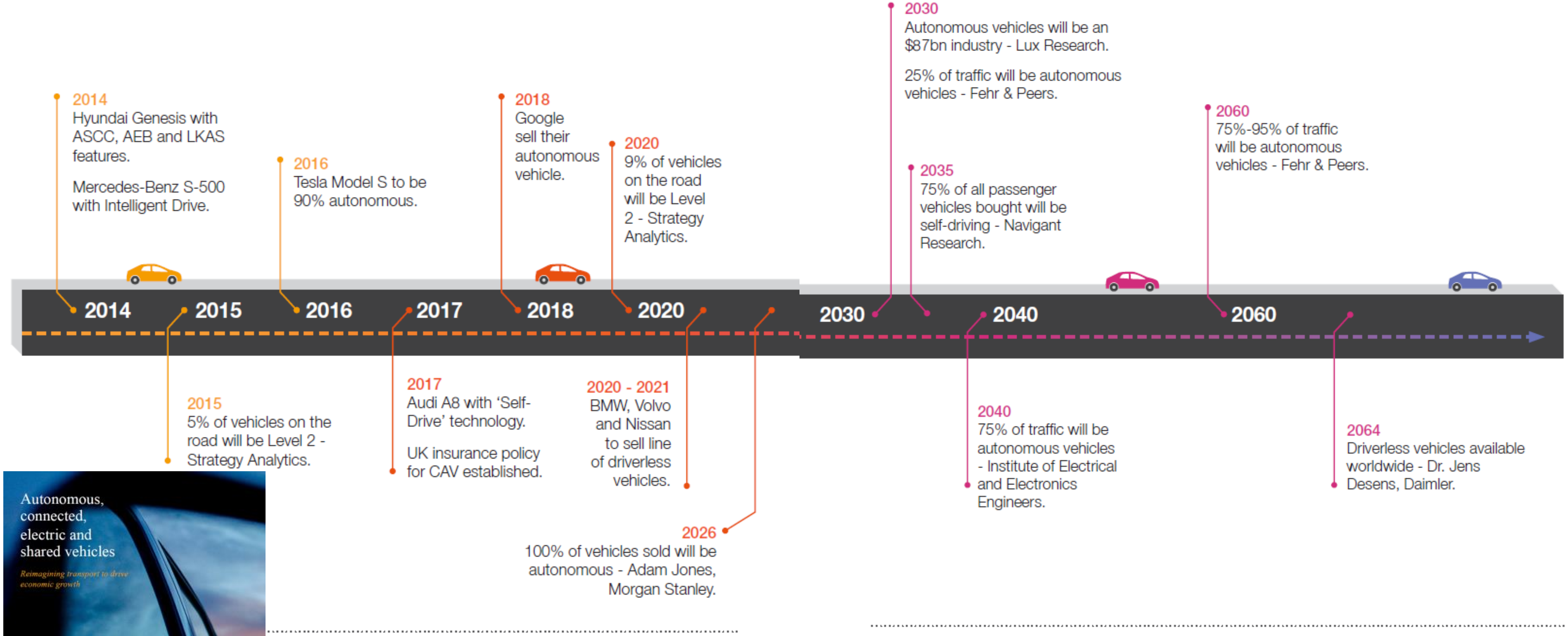
7. Construction will get faster, using 3D and 4D printing, and self-transforming objects which self-assemble.

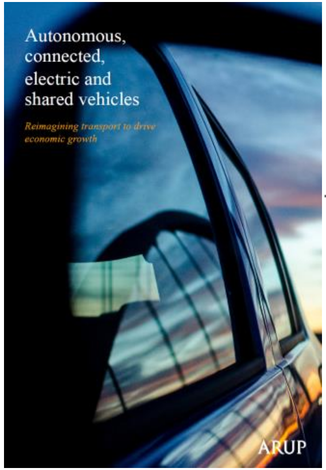
8. New, disruptive ideas will emerge, for making mass transit faster, safer and naging to the environment.

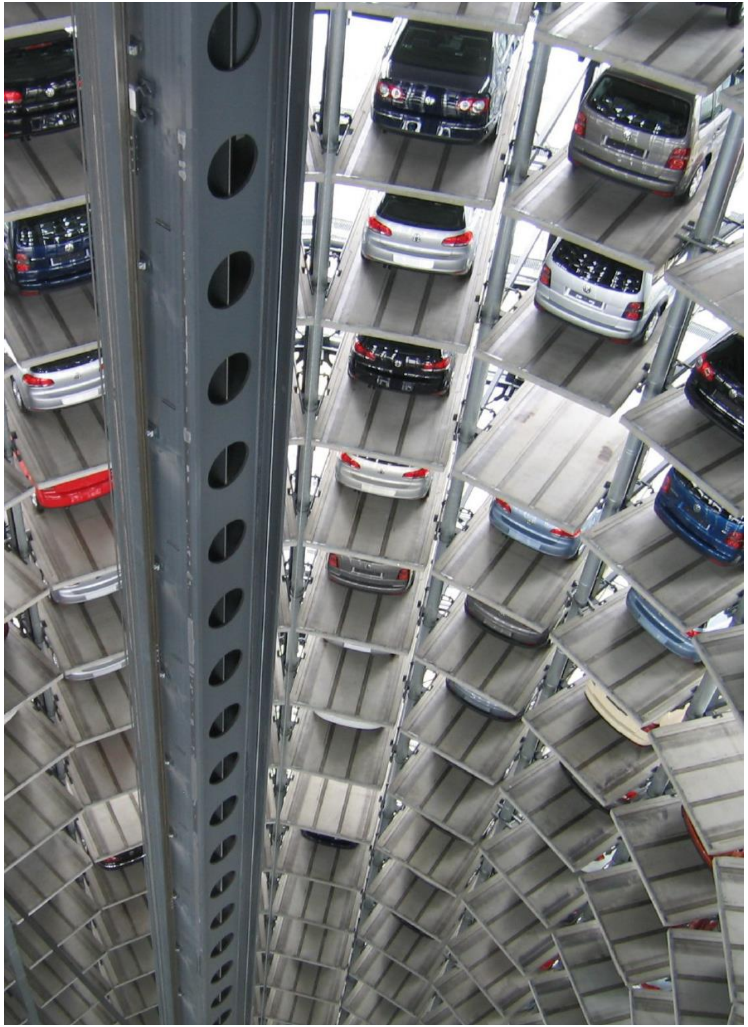
Ve will increasingly use more rable technology such as skeletons.

rect neural control over devices ehicles will be accessible to the ry.

Balfour Beatty


2014
Hyundai Genesis with ASCC, AEB and LKAS features.
Mercedes-Benz S-500 with Intelligent Drive.
2016
Tesla Model S to be 90% autonomous.
2018
Google sell their autonomous vehicle.
2020
9% of vehicles on the road will be Level 2 - Strategy Analytics.
2030
Autonomous vehicles will be an $87bn industry - Lux Research.
25% of traffic will be autonomous vehicles - Fehr & Peers.
2035
75% of all passenger vehicles bought will be self-driving - Navigant Research.
2060
75%-95% of traffic will be autonomous vehicles - Fehr & Peers.
2014
2015
2016
2017
2018
2020
2030
2040
2060
2015
5% of vehicles on the road will be Level 2 - Strategy Analytics.
2017
Audi A8 with 'Self-Drive' technology.
UK insurance policy for CAV established.
2020 - 2021
BMW, Volvo and Nissan to sell line of driverless vehicles.
2026
100% of vehicles sold will be autonomous - Adam Jones, Morgan Stanley.
2040
75% of traffic will be autonomous vehicles - Institute of Electrical and Electronics Engineers.
2064
Driverless vehicles available worldwide - Dr. Jens Desens, Daimler.


Autonomous, connected, electric and shared vehicles
Reimagining transport to drive economic growth
ARUP



The Magnificent Seven | *What needs to happen next*

ONE

Establish a capability map for industries aligned to the CAV sector and identify areas of focus and growth as well as gaps in our skills base.

TWO

Develop an understanding of the requirements needed for cost-effective and sustainable infrastructure, both physical and virtual, to support the deployment of CAVs.

THREE

Review existing capital projects underway, assess the implications of projected technology developments and user scenarios, and tease out the related roadmap.

FOUR

Deliver a technology-driven policy position that protects the needs of the travelling public and encourages economic growth and diversity linked to the creation of a systems-based approach to CAV deployment and job creation.

FIVE

Examine the data already in existence within public bodies linked to CAV markets to help generate relevant services and identify relevant data catalogues to enable growth and exploitation of commercial opportunities.

SIX

Identify the fundamental requirements for the creation of a viable national intelligent mobility cluster of excellence that facilitates indigenous growth and foreign investment to bring together CAV-based services and technologies and enable a centralised approach to research and development.

SEVEN

Create an environment for collaboration between public and private bodies in the development of CAV-based requirements and spearhead the creation of Ireland's unique selling points in this field to be used in foreign investment and partnership creation at a local and global level.

Top sources of greenhouse gases

Cement Production (7/10)
GHG: Carbon Dioxide
Global GHG Emissions: 4%
A worker walks over newly made pipes at a cement plant in Yingtan, China.
Cement production is very energy intensive, requiring quarrying of limestone, then its processing at very high temperatures.
CO_2 emitted by cement factories around the world accounts for nearly 4% of global GHG emissions, according to World Resources Institute. (Source: Reuters)

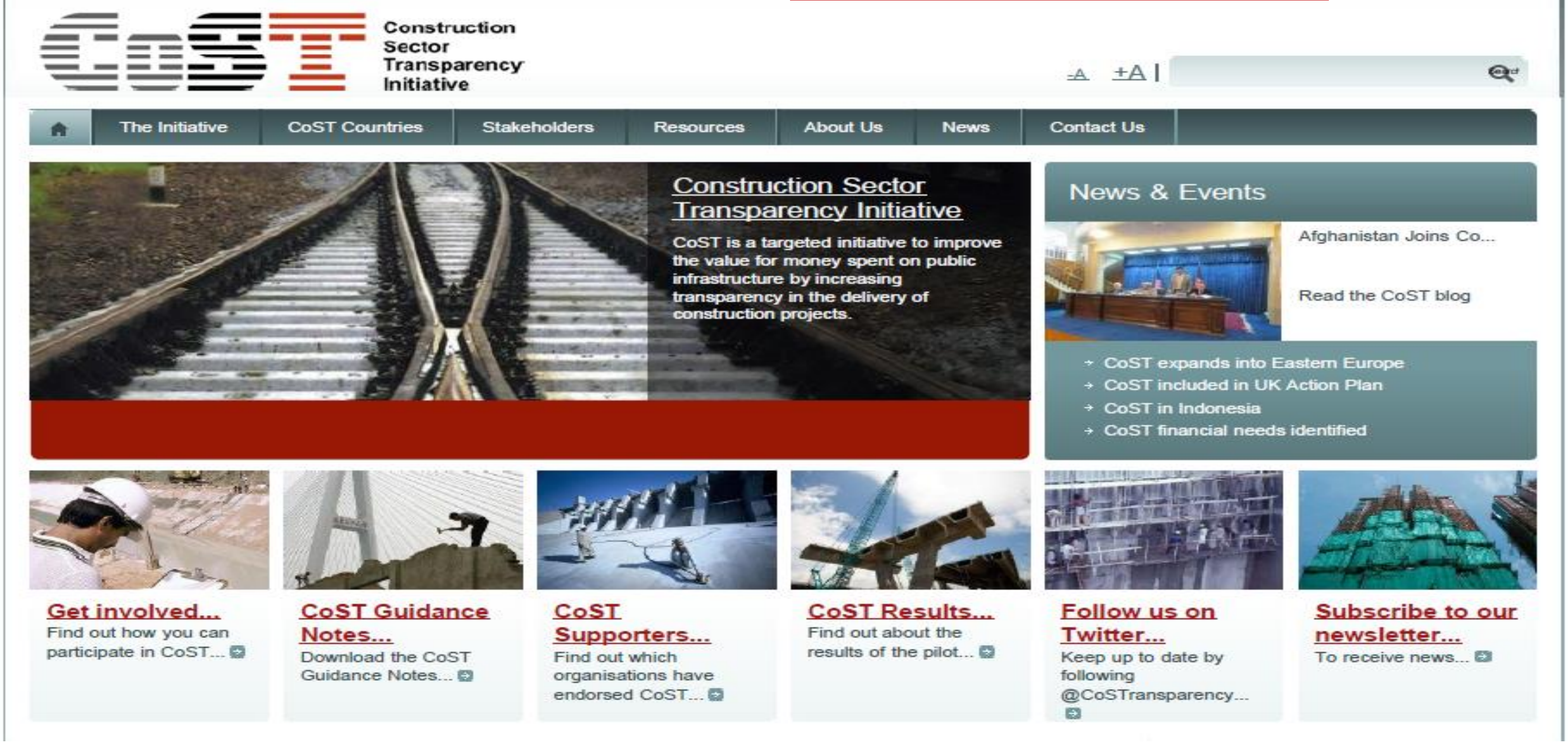
Top 10 Sources of GHGs and percentage of total emissions

1. Power Plants … 25% GHG emissions
2. Deforestation … 20%
3. Road Transport … 13%
4. Oil and Gas … 6.3%
5. Fertilizers … 6%
6. Livestock … 5.1%
7. Cement Production … 4%
8. Aviation … 3.5%
9. Iron & Steel Manuf… 3.2%
10. Garbage … 3%

(Source: Reuters)

http://knowledge.allianz.com/climate/impacts/?651/ten-sources-of-greenhouse-gases-gallery

Governance in construction



FISHERIES MINISTER INSTALLED AS DEVELOPMENT QUEEN OF DZELUKOPE

Minister for Fisheries and Aquaculture Development, Hon. Elizabeth Afoley Quaye, has been installed Development Queen of Dzelukope in Keta Municipality of Volta Region. She is expected to spearhead developmental activities of the area.

Togbui Gatsiko VI appealed to her for the construction of road leading to Gobah beach and impressed upon her to ensure people of Dzelukope benefitted from One-District One-Factory initiative and any other developmental projects.

Overlord of Anlo, Togbui Sri III, encouraged Mama Dunenyo to continue the hard work and also support the people in their fishing business to improve their livelihoods.

Hon. Archibald Letsa, Volta Regional Minister, re-affirmed government's commitment to constructing beach roads. He abhorred winning of sand at the beach, saying it was counterproductive, since the problem created would require money to build a sea defence, adding that when the Keta Lagoon was dredged, there would be enough sand.

Member of Council of State, Nii Adjiri Blankson, assured the people that there would be mass road repairs and construction in the country before the end of the year of which the area would be a beneficiary.

Mama Dunenyo, emphasized that the appeal for dredging of Keta Lagoon remained one of her focus areas and she would do her best to achieve it.

Source: ISD (Eva Frempon-Ntiamoah)

http://ghana.gov.gh/index.php/media-center/regional-news/4526-fisheries-minister-installed-as-development-queen-of-dzelukope

What is a profession?

Professional services differ from 'normal' services. They …

- go beyond application of skill to moral contributions of professionals to society (Bellah, 1985)
- involve externality effects which impinge upon society; other services are internalised by clients
- carry some moral responsibility and invoke some public interest or public good argument… (Low, 1999).
- licensing and registration requirements
- client orientation (Meyer, xxx)
- the colleague community and peer control
- public recognition and trust

- Thus, to Flexner (1915), professions are intellectual, learned, practical, a result of training, self-organized, and altruistic.
- Greenwood (1957): five attributes that "all professions seem to possess: (1) systematic theory, (2) authority, (3) community sanction, (4) ethical codes, and (5) a culture".

Lord Benson:

- Members of the profession must be independent in thought and outlook.
- A profession must give leadership to the public it serves.

Features of a profession

Flexner (1915): the professions: "…involve personally responsible intellectual activity; they derive their material immediately from learning and science; they possess an organized and educationally communicable technique; they have evolved into definite status, social and professional; and they tend to become, more and more clearly, organs for the achievement of large social ends.

Maister (1997): 'professional' is not a label one gives to oneself.

Robinson et al. (2007): features associated with prof'nals:

1. Specialised knowledge and skills
2. Power of specialised knowledge and capacity to significantly affect others (persons, groups or the environment)
3. Monopoly or near monopoly of a particular skill
4. Members undergo an extensive period of training that includes development of skills and intellect
5. Membership of a professional body responsible for maintaining standards, protecting rights, ensuring proper training
6. Autonomy of practice.

Dimensions of professionalism

American Pharmaceutical Association Task Force on Professionalism (2000): one acts professionally when one displays 10 traits:

- accountability for one's actions
- commitment to self-improvement of skills and knowledge
- conscience and trustworthiness
- covenantal relationship with client
- creativity and innovation
- ethically sound decision-making
- knowledge and skills of a profession
- leadership
- pride in the profession
- service oriented.

American Board of Internal Medicine (2001): elements of professionalism are commitment to:

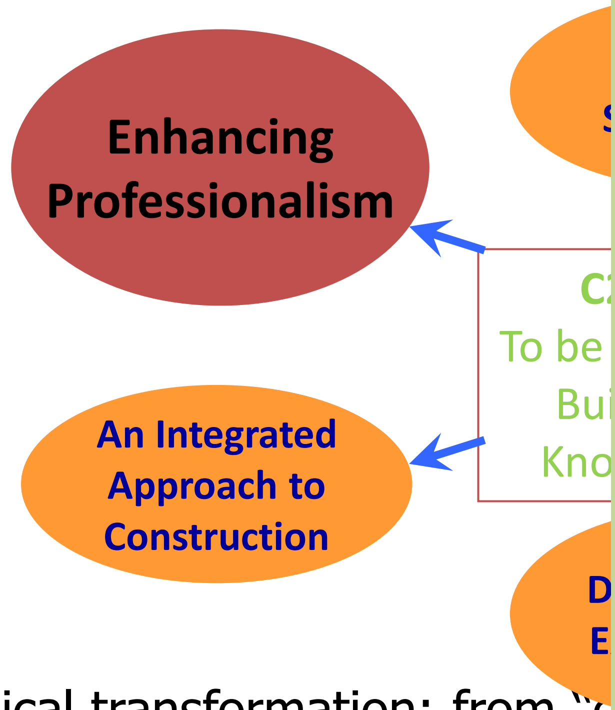
- highest standards of excellence in practice and in generation, dissemination of knowledge
- sustain interest, welfare of clients
- be responsive to needs of society.

To fulfil above 3 elements, one must have 6 tenets:

- altruism
- accountability
- excellence,
- duty,
- honour and integrity
- respect for others.

Construction 21 Report (Singapore)

- C21 gave 39 recommendations,



- Radical transformation: from "c
"professional, productive, progr

C21 report noted:

"It is crucial that we change the image of the industry by raising the professionalism and capabilities of industry players …when carrying out their responsibilities. They should adopt a more progressive and long-term stance and work for the improvement of the industry... This is necessary in order that efforts to upgrade the industry are not derailed by myopic self-interests or short-term gains...

"The road to greater professionalism will not be an easy one. It will require a change in attitudes, behaviours and mindsets" (p. 26).

Key recommendations

- **Ethics and the public interest**, and a shared code of conduct – deal with current confusion between ethics and public interest, clearly define and codify ethics, expectations centred on the public interest an[…] and public confidence through tr[…]

- **Education and competence** -- […] built environment's education sy[…] relevance, encouraging greater i[…] professionals for work in a multi-[…]

- **Research and a body of know**[…] importance for the professions' future of re-establishing a […]earch

- […] offer […]**nce.**

"What our clients and customers want is our knowledge and the judgments it enables. Society also wants that and where Institutes are falling short is in being floppy about the knowledge and judgment of their members, not so much about their ethical behavior. Ethics are of course essential but it is knowledge on which is based our service to both clients and public."

Sunand Prasad, Senior Partner Penoyre & Prasad, formerly President RIBA

"Society would expect the professional bodies to collaborate. They would expect the professionals in the built environment to understand that they work in a complex multidisciplinary world, and they would expect us to find mature ways of working with each other."

Colin Haylock, Past President, Royal Town Planning Institute

[…]sion Report on the Future of Professionalism, 2015)

GHANA INSTITUTE OF PLANNERS HOLDS ANNUAL GENERALMEETING

At 46th Annual General Meeting of Ghana Institute of Planners (GIP) in Accra, Mrs Patricia Appiagye, Deputy Minister for Environment, Science, Technology and Innovation noted that Ghana was one of few countries in Africa that had developed a National Urban Policy and Action Plan; National Housing Policy; and Draft National Slum Upgrading Strategy to address urban and housing problems and plan futur ... g in vulnerable communities or disaster-prone areas, live ... Reforms in Land Use and Spatial system driven by Lar ... e delivery of affordable housing through efficient land us ...

Mrs Appiagye: National Building Regulations, LI 1630 ... Ghana Institution of Engineers... She urged built envir ... ve regulatory, monitoring mechanisms in the housing sec ... Minister for Works and Housing, Hon. Samuel Atta-Aky ... ocal building materials to reduce cost of building, and redu ... research, leading to development of high-grades of lo ... maintenance of government's properties, a situation h ... e for the management of government's assets.

Hon. Atta-Kyea: government had developed a Draft Na ... guide validation, adoption and gazetting of the Code. ... expertise into construction sector and to real estate de ...

Mr Alfred Kwasi Opoku, President, GIP: determining be ... on of appropriate mix in terms of design, materials, policy. Planners should protect integrity of Planning profession and work hard to be relevant to society, chart a new course for the profession and leave a credible legacy. They should resist corruption by granting permits to only qualified recipients and writing reports that reflected the actual situations.

Participants stressed the need to redefine the term affordability, support private developers in housing delivery and change the mindset of the people on the use of local materials.

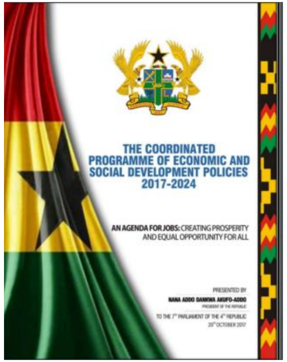
Source: ISD (G.D. Zaney), http://ghana.gov.gh/index.php/media-center/news/4241-ghana-institute-of-planners-holds-annual-general-meeting

1D1F initiative has 5 strategic objectives:

- to create massive employment, particularly for rural, peri-urban youth to improve income levels and standard of living, reduce rural-urban migration
- to add value to natural resources of each district and exploit economic potential of each district based on its comparative advantage
- to ensure balanced spatial spread of industries, to stimulate economic activity in different parts of the country
- to enhance production of local substitutes for imported goods, to conserve foreign exchange
- to promote exports.

What construction industry can contribute:

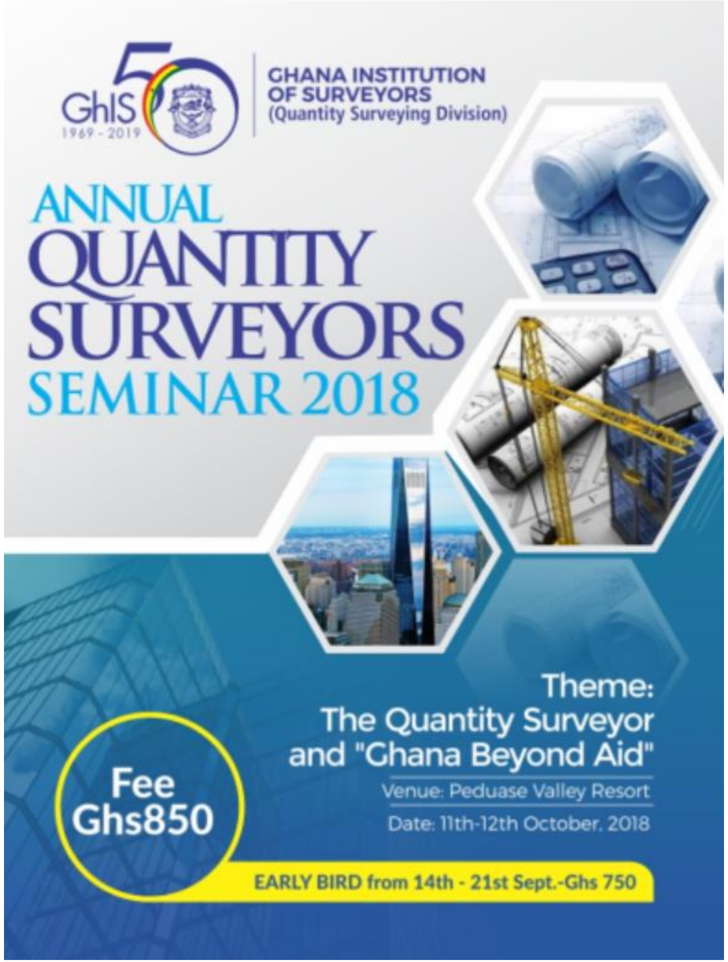
* planning, designing, building the factories effectively, efficient
* development of local construction value-chain businesses, such as local materials
* ensuring efficiency of infrastructure
* creating jobs, incomes in local community
* developing skills for resilience.



"Ghana Beyond Aid" demands that we do not become Casual but thorough to:

- audit what constitutes Ghana beyond aid with coherent strategy that unites construction industry and policy reforms
- audit current state of sectors including water supply and sanitation
- identify sectors and investors
- pass PPP Law – the case of STC for example
- aid young entrepreneurs and create businessmen including contractors
- analyse foreign influence on policy disproportionate to financial value of aid
- promote national ownership not local content/foreign content."

…Mr K.H. Osei-Asante, speech on 30 August 2018.



My wish list for Ghana construction

- Industry-level regulatory and developmental agency …well empowered, sustainably funded, staffed with the best
- National construction industry policy …reviewed, fine-tuned as necessary
- National construction industry strategy …developed with stakeholders, based on comprehensive industry study
- Annual Stakeholders' Forum, chaired by Infrastructure-related Ministers
- Single umbrella organisation for private sector of industry
- Construction Leadership Council comprising public, private sector representatives as industry's champion
- Bi-annual state-of-the-industry study of construction, including an assessment based on agreed key performance indicators

- Accurate, comprehensive data and information on construction industry
  - effective research and development on national issues, but at forefront of knowledge
  - collaboration among universities and research centres
  - effective industry-research links for translation of research into use
- A new, purposeful approach to policy making... sound discussion of background, rationale; positioning in context of past, existing related policies, initiatives; clear content, proposals; impression of "a game changer"
  - in future, "deliver/undertake what you publish or declare, or explain"
- A technology-enabled industry ("right technology in context", but "we should not be left behind")
- Knowledgeable clients, demanding communities desiring high standards of provision – feeling they deserve it, knowing they have the right, having the means to gain access to and use information

- Long-term oriented construction companies
  - effective registration of companies and monitoring of their performance
  - national, sustainable construction company development programme (both contractors and consultants, targeted to needs of categories of firms)
- Conducive operating environment for industry
  - procurement law and practice
  - professional, competent, business minded materials and equipment suppliers; and supply chain capabilities in the construction companies
  - "Total Stakeholder Participation" (where the community is fully engaged and actively involved)
- Professionalism and ethics in practice. Society holding practitioners accountable. Professionals being leaders of society.

- Construction industry is of strategic importance to Ghana.
- Countries which recognise importance of the industry ascertain its needs; develop strategies, policies, regulations; institute measures to develop it, improve its performance.

We should endeavour to ensure the emergence of the construction industry Ghana deserves.

We should consider:

- what government can do
- what industry must do
- what industry and government must do together
- what other stakeholders can do.

Reframing the question …

What Ghana deserves, from…

- Where we have come from
- Investments we have made
- Current performance gap: distance to the frontier
- Where we want to go.

Changing operating mindsets…

- Beyond cost reduction
- Beyond safeguarding
- Beyond smart
- Wealth creating
- Growth inducing
- Future proofing

Changing attitudinal mindsets…

- Is it not my responsibility?
- Is this the best I can do?
- Should I not help to find a Ghana way?

End of presentation

Thank you for your attention