

G&P GEOTECHNICS SDN BHD*(Formerly known as Gue & Partners Sdn Bhd)***(Geotechnical Consultants)****SUMMARY REPORT FOR CONFERENCE/SEMINAR/COURSE**

NAME OF CONFERENCE : 15th ACES-ACEM Dialogue 2019

VENUE : Ramada Hotel Singapore, Zhongshan 2, Level 2

DATE : 16th November 2019 ATTENDED BY : LSS and ACES and ACEM Council Members

SPEAKER : Mr. Yee Cheng Chuan (Ronnie & Koh) – Kampung Admiralty
 Er. Chua Tong Seng (ACES President) – Brief Introduction of BCA's Internationalisation Efforts with Industry
 Er. Ling Shiang Yun (M&A/Meinhardt) – Venturing Overseas, i.e. Vietnam
 Mr. Teo Say Hong (SJ) - Growth and Expansion of local companies – Story of SJ
 Ir. Liew Shaw Shong (G&P) – Tanjung Bunga Landslide Case
 Ir. Saw Hin Cheong (Arup) – Setia SPICE Convention Centre (Gold Medal Winner of the ACEM Engineering Award 2019)

ORGANISER : ACES

**General comments (ideally not more than 20 lines) relevant to our work:
 (including a programme summary of topics and authors)**

- a. Kampung Admiralty Project Brief (Figure 1)
- Integrated Facilities and Amenities for elderly persons and child care
 - Plaza – A Community multi-function space
 - Retail – Shops, Supermarket, bank, F&B outlets, pharmacy, etc
 - Hawker Centre – 900 seats with 43 cooked food stalls (Figure 7)
 - Admiralty Medical Centre – Run by national healthcare
 - Active Aging Hub
 - Child Care Centre
 - Roof Garden for city farmers from the elderly residents (Figure 6)
 - HDB Studio Apartment – 104 units (400 to 550 m² for SGD 95k to 103k/unit) for elderly 55 years old and above
 - Basement Car Parking & 500 bicycle lots (Hardware system by Spain and monthly charge : SGD45/month too high, see Figure 3)
 - Precast Concrete Elements were extensively used (Figures 2, 4 & 5)



Figure 1 : Overview of Kampung Admiralty (Vertical Kampung)



Figure 2 : Engrooved Springer System into Precast Slab



Figure 3 : Mechanical Bicycle Parking System



Figure 4 : Precast Concrete Canopy Shed



Figure 5 : Precast Concrete seating with Stainless Steel Armrest preventing Homeless lying over the whole seat at night



Figure 6 : Roof Garden for Elderly City Farmers



Figure 7 : Tray Return Station at Food Stalls

b. BCA's Internationalisation Efforts with Industry (John_Tan@bca.gov.sg)

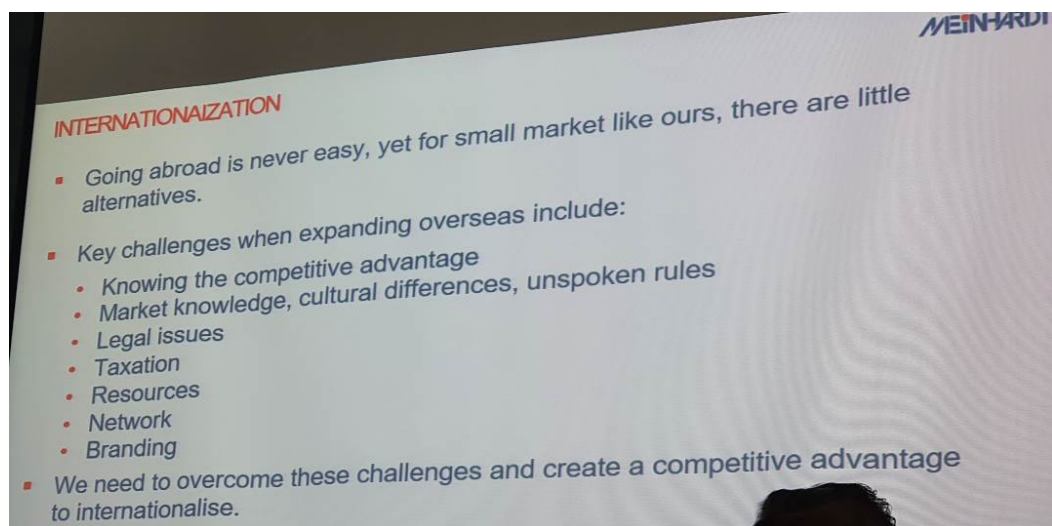
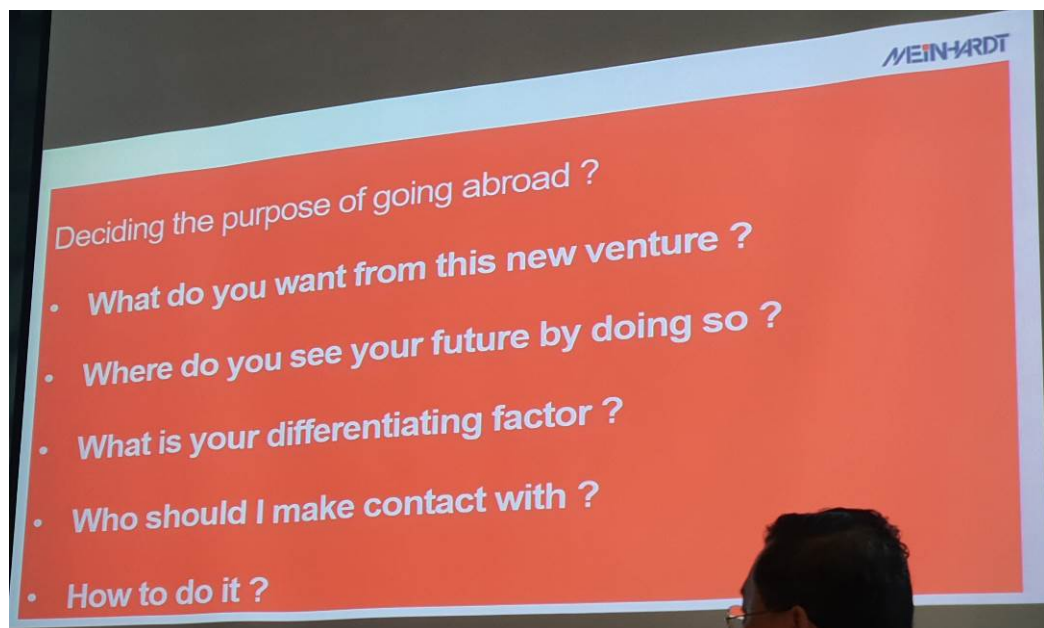
- Efforts with the salient points of (i) Rapid Urbanisation with increase of population of 1.5M/week in city, (ii) Aging Population & (iii) Climate Change
- Industry Transformation Map (Green Building, Design for Manufacturing & Assembly – IBS, Integrated Digital Delivery)

c. Venturing Oversea

Some Interesting points for venturing overseas presented by former M&A Director, not become part of Meinhardt. He was sharing his experience and advice of venturing to Vietnam.

Some statistics provided :

- The staff overhead of M&A is about monthly SGD100k/month for 30+ staff strength
- In Vietnam, fresh engineer is getting monthly salary of USD300 to 500k, whereas USD1000 for engineer with 10 years work experience



RECOGNISING RISKS IN GOING ABROAD

- You become responsible for:
 - Capital Investment
 - Staff salaries
 - Operational costs (Rental, auditors, legal, taxes etc)
 - Finding and retaining staff
 - Finding new business
 - PI and other insurances
 - Invest in hardwares and softwares

APPROACH TO INTERNATIONALIZATION

Organic Expansion

By Acquisition

STRATEGIES FOR BUSINESS RESILIENCE

Diversification

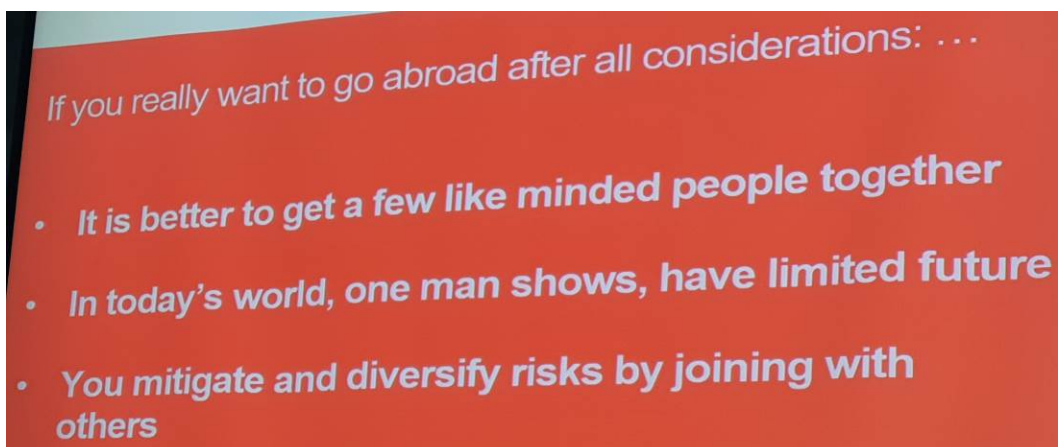
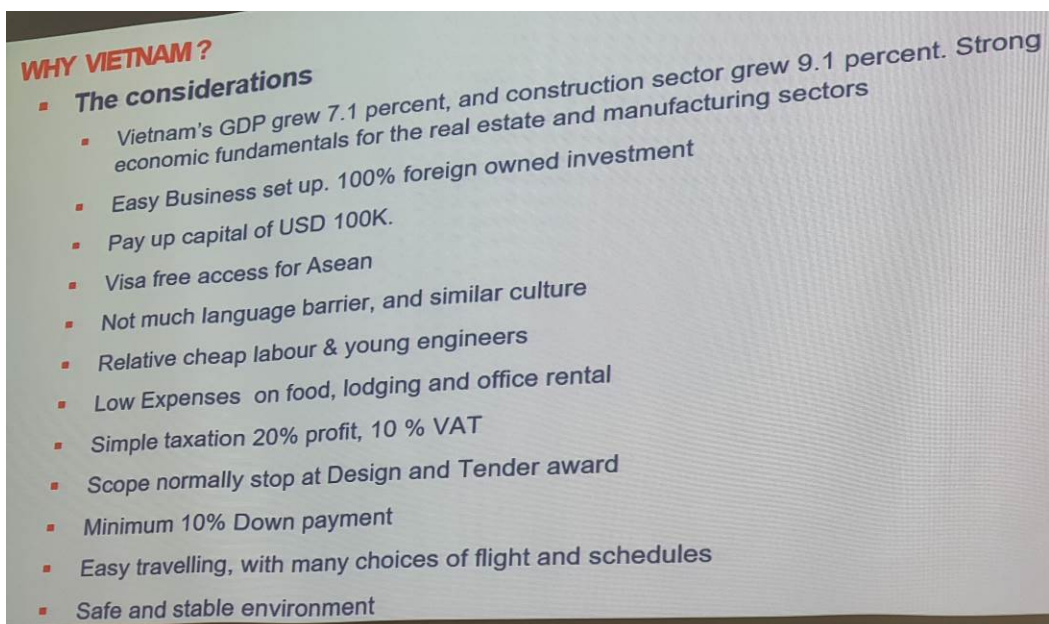
- Diversify service lines, e.g. Infra, PM, Asset Management & Environmental services
- Diversify geography

Collaboration (M+A)

- Join overseas missions by Government agencies to study the markets
- Collaboration with bigger local or international companies
- Become bigger and better by combining with others

Project Financing & Advisory

- ADB says developing countries in APAC need to spend USD 1 trillion per year (\$26T to 2030)
- South Asia alone needs to double its infra spending from 3.5% of GDP to 7%
- Scope to help lending agencies to lead feasibility studies and financial advisory services



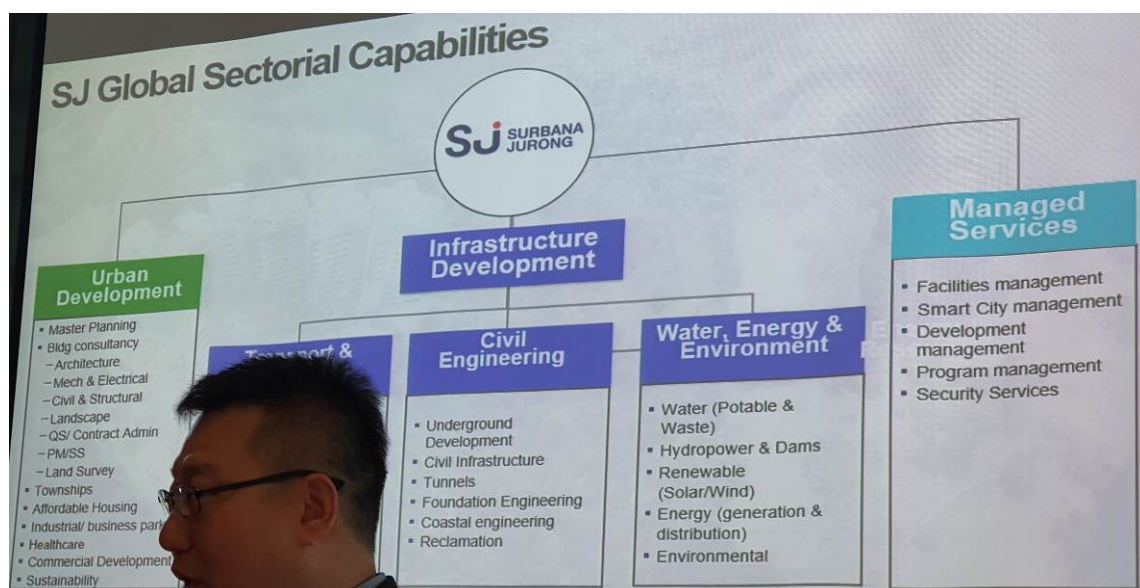
Moral of the story is...

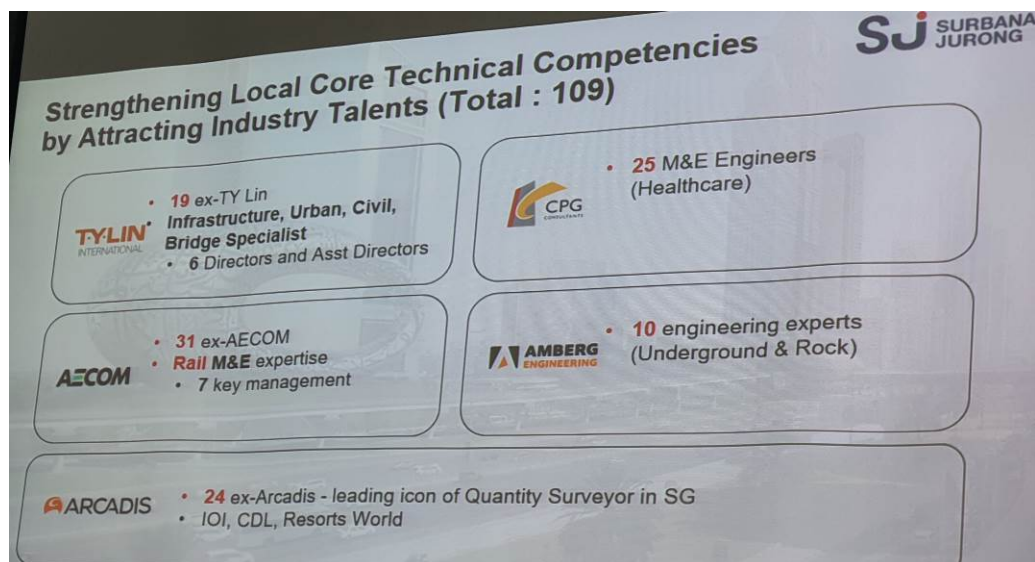
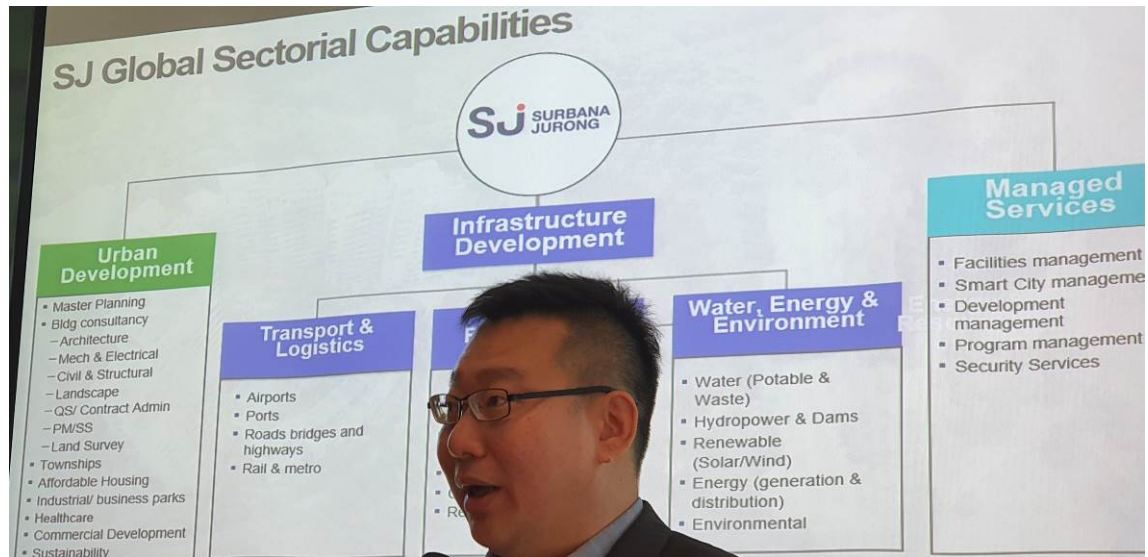
- Small companies will have limited future
- Only large global companies will be able to survive and succeed in today's markets with ability to deliver large and complex projects
- This is why I decided to M & A with Meinhardt

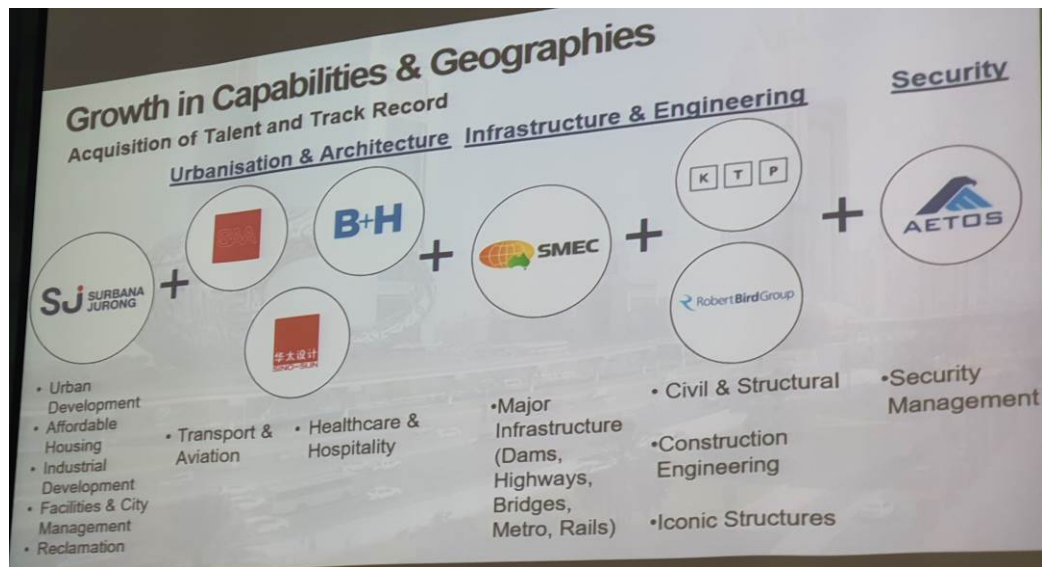
d. Growth and Expansion of local company – Story of SJ

Some facts :

- In 2015, Surbana from HDB merged with jtc of Jurong with backup by Tamasek forming Surbana-Jurong (SJ)
- Staffing increases from 3,200 to 16,500
- Turnover from SGD300M to SGD1.6B
- 40% of revenue from Facilities Management (stable & recurring incoming from managing existing assets)
- Design with algorithm for efficient/fast/powerful option exploration is very impressive. Basically the algorithm is developed to explore all possible configuration of options/solutions for project team and client to decide.







Strategic Partnerships

INVESTMENT

- Mitsubishi Corporation
- Japan Overseas Infrastructure Investment Co. for Transport & Urban Development
- Bond Guarantee (ADE)
- CGIF Credit Guarantee Investment Fund
- Real Estate Investment
- M&G

TECHNOLOGY

- Microsoft
- BIM FM
- 华建集团 ARCPLUS
- Computational BIM
- HELIX RE

TECHNICAL

- Safdie Architects
- ROCCO 许李严
- Africa Housing
- 中信建设 CITIC CONSTRUCTION
- Highway & Road - BRI
- 中国公路工程咨询集团有限公司 CHINA HIGHWAY ENGINEERING CONSULTING CORPORATION



SJ's Top Competitors

Revenue 2018 (SGD)

SJ SURBANA JURONG	1.6 b
M M MOTT MACDONALD	2.5 b
ARUP	2.7 b
ARCADIS	5.0 b
wsp	5.7 b
AECOM	20.0 b

- e. Tanjung Bunga Landslide Case (PPT file in Server Standard\Technical Presentation folder)
- Liew SS presented the case based on the Report of Commission of Inquiry
 - ACES Council members interested to find out why the engineer of Piling D&B Contractor, namely One Smart, did not receive the similar criminal charge as the project consultant and why this project did not have ICE.
 - Ir. Saw Hin Cheong of Arup Perunding (Penang) shared the details of

rehabilitation works using mass concrete to dental filling up the failed scarp with surface turfing on the mass concrete with geocells surface cover. The original basement was raised significantly to avoid excessive pilecap excavation. He also mentioned that the site was formerly the suicide place of Japanese soldiers after losing the war and the landowner, Boon Siew, had given instruction no development of this land.

f. Setia SPICE Convention Centre by Ir. Saw Hin Cheong

- The space frame system with doubled slab supporting the landscape garden above and 40m column free convention space
- The iconic curve roof at the entrance is supported on three pin joint and one guided roller support to relief the lateral force.
- Special design jointing elements was used to connect the tension and compression elements and, also the pipe encasement to vertical columns were used to provide rigid support to the space frame
- Impressive design of the beam depth-span ratio of the iconic space frame roof
- The technical details are more elaborate than what was presented in the ACEM award
- Other than the rehabilitation works of the Tanjung Bunga landslide incident mentioned above, Ir. Saw HC also presented a underpinning works for preserving an heritage building with construction of underlying two levels basement. The underpinning works were using micropiles and compressive plates gripping the masonry columns supported by the micropiles. This seems to be very daring approach.

Recommendation for:

a) Colleague

Refer to the summary above. Dreamhome project team can have a look of the project concept

Size does matter in the new trend of consultancy practices and challenging environment. We have to prepare to face the future challenges posted by the big boys around. The use of technology likes BIM, design by algorithm, big data for decision and trend development, artificial intelligent (AI), industrial revolution (IR 4.0), virtual reality/visualisation are forthcoming soon.

b) Improvement to G&P's system or/and company operation

G&P shall take step to embrace to these developments worldwide in order to maintain the pioneering position in the country if not at par with the regional leaders in consultancy practices.

Training Effectiveness Assessment (<i>The Directors are exempted</i>)	
Training Objectives: Very good exposure to international practice!	
Evaluation: <input checked="" type="checkbox"/> Excellence <input type="checkbox"/> Good <input type="checkbox"/> Satisfactory <input type="checkbox"/> Not Accepted	
Recommendation for Next Course of Action (If Any): As suggested and remarked above	
Assessed by: _____ CCM _____ ()	Date: 18 th October 2019