School of Engineering Lecture Outline

Engineers Without Borders Session

Class: ENG390 – Engineering in a Global Context

“Global Development – 21st Century Fit-for-Purpose”

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Isaiah writes in Chapter 54:2 (NIV): “Enlarge the place of your tent, stretch your tent curtains wide, do not hold back; lengthen your cords, strengthen your stakes.”

SHARP:

3 Events that shaped my life and life-choices

1) BIAFRA TRAGEDY
2) RÄDABARNEN (SAVE THE CHILDREN) AND THE LEPROSY DILEMMA
3) ENTREPRENEURSHIP ENABLED (Furniture Factory and Electrical Engineering Small Businesses)

POV:

3 Major Changes to the International Development Space:

1) Shift: from MDGs to SDGS 2030 and the Global Development Agenda – a “New Currency”
      i. Goal 1: No Poverty
      ii. Goal 2: Zero Hunger
      iii. Goal 3: Good Health & Well-Being for people
      iv. Goal 4: Quality Education
      v. Goal 5: Gender Equality
      vi. Goal 6: Clean Water and Sanitation
      vii. Goal 7: Affordable and Clean Energy
      viii. Goal 8: Decent Work and Economic Growth
      ix. Goal 9: Industry, Innovation and Infrastructure
      x. Goal 10: Reduced Inequalities
      xi. Goal 11: Sustainable Cities and Communities
xii. Goal 12: Responsible Consumption and Production
xiii. Goal 13: Climate Action
xiv. Goal 14: Life Below Water
xv. Goal 15: Life on Land
xvi. **Goal 16: Peace, Justice and Strong Institutions**
xvii. Goal 17: Partnerships for the Goals

d. Most relevant SDGs to Walla Walla University
   i. Goals 6, 7, 8, 9, 11 and 16 (See Bold SDGs above)
   ii. WWU Core Distinctive in Academics and Practice

e. An encouragement to WWU to seriously consider investing in core capabilities and positioning

2) Shift: from traditional AID to Nation-building – “Stabilisation and Governance”
   a. OECD country Political Assessment and Analysis
   b. Assumption: The world would be a better place if all countries were “Stable”
   c. Question: Do we know what that would take?
   d. Research: 3-yr study at the State-Ministerial Level
   e. Answer: 3 Core Ministries required to assure minimum level of Stability
      i. Ministry of Justice and Law
      ii. Ministry of Defence and Security
      iii. Ministry of Finance and Economics
   f. Decision: OECD country shift by Bilateral Donors away from traditional AID actors
   g. Result: 85-90% of money will flow Bilaterally to Multilateral, Public and Private Sector actors; 10-15% will flow to traditional AID Actors for Failed State and Conflict Management
   h. Impact: potential demise of the INGO industry as we know it today

3) Shift: from Physical AID to Digital Aid – “the 4th Industrial Revolution”
   a. Mobile Cash Transfer becoming preferred norm
   b. Speed: Quicker, Cheaper, Safer
   c. Scale: Deeper reach, broader access, flexible
   d. Democratisation of Global Economics to all levels of society – poor and rich
   e. Disintermediation of the Global Financial and Banking mechanisms
   f. Opening the door to new products and services to the poor and marginalized via Micro Finance and Micro Insurance vehicles

**BENEFIT:**

3 Major Benefits

1) Employment of: Hybrid Business Models – Charity vs Market-based Models
   a. Poverty Ideology vs Prosperity Ideology – a Legacy from UNDP and the World Bank
   b. Access to Bilateral funding dependent on PRSPs
   c. PRSPs designed along Western norms – often not suitable or transferable to local contexts
2) Employment of: Long-term and Macro Horizons – Additive vs Reductive Strategies
   a. Below the “Zero” line – the “Home” of AID, UN and Civil Society Actors
   b. Above the “Zero” line – the “Home” to Market Capital, Business and Entrepreneurship
   c. There are NO EXAMPLES where a Society or Nation-State has moved from poor to
      prosperous via any set of Reductive Strategies
   d. Below the “Zero” line - Goals and Objectives are narrow, micro, short-term, negative – a
      set of projectized interventions
   e. Above the “Zero” line – Vision and Horizons are immense, exciting and creative and
      invite collaboration, resources and winning ideas

3) Employment of: Multi-Sector Platforms – Integrated and Interdependent vs Siloed Endeavours
   a. Three Core Sectors – Public, Private and Civil Society
   b. Fourth Sector – emerging new space where these three meet
   c. Shift from Projects to Platform mechanisms
   d. PPPs did not work – no ownership
   e. Platforms do work – well managed and all parties have clear roles, incentives, investments articulated in some form of ROI
   f. Convene, Connect and Catalyse
   g. Leverage Charity and Market mechanisms for Humanity

CONTENT:

3 Target Interests

1) Special Interest to Engineering Students
   a. Renewable Energy Solutions
      i. SDG Goal 7: Clean Energy
      ii. (wind, solar, hydro, geo...)
      iii. UN Secretary General – Ban Ki-moon states “...Energy is the Golden Thread’
           connecting economic growth, social equity, and environmental sustainability”
      iv. He also remarks that Energy is the “final” intervention holding poverty in check;
           or said another way, access to energy is final “key” to eliminating poverty and
           creating prosperity
      v. Read up on “Sustainable Energy for All Initiative”
      vi. Energy linked to lighting, child protection, protection of girls and women,
           education and studying at home, food processing, food production, food
           storage, growth of household and community level economics, mobile cash
           transfers, digital and mobile trade, and of course scores of other interventions

   b. Urban Planning Solutions
      i. SDG Goal 11: Sustainable Cities and Communities
      ii. (city slums development, transportation, safety and protection, security,
          schooling, technology, jobs, micro economics...)
      iii. Africa: 5.5 of 10
iv. Asia: 7 of 10
v. Latin America: 8.5 of 10
vi. Role of Nation-State paradigm is already being challenged
vii. By 2030, most continents 9 of 10 in urban centres
viii. By 2030, Municipal Ministries and City Mayors most powerful in roles of Governance

c. Infrastructure Solutions
i. **SDG Goal 9: Industry, Innovation and Infrastructure**
   ii. (sewer systems, potable water, garbage collection, recycling, road accident prevention, connectivity, transportation, bussing, shelter and housing, storage, food production, food protection, etc...)
   iii. This goal is highly leveragable with one of highest private and public-sector alignements
   iv. Also goal with one of highest capital funding likelihoods

2) Special Interest to International Development Students
a. Micro-Finance and Micro-Insurance; Hybrid and Blended Finance; Development Finance
i. **SDG Goal 8: Decent Work and Economic Development**
   ii. Micro-Finance: (savings and loans, village banking, cooperatives, credit unions, animal banks, food banks, small enterprise development, medium size enterprise development...)
   iii. Micro-Insurance: crop insurance, savings insurance, life insurance, death insurance, property insurance, mortgage insurance, loss of job insurance, asset insurance, food storage insurance, mobile cash transfer insurance...)
   iv. Hybrid financing – soft and hard resources: charity and philanthropy used as leverage; market-based capital from core business ventures used as primary resource; but includes intellectual capital, local know-how, Gifts in Kind, Services in Kind;
   v. Blended financing – hard money: Grants, Donations, Market-Capital, Social Impact Funding, Social Bonds, Public Sector Financing, Local Taxation and Fees, Fee for Services...
   vi. Development Finance – grant money: Grants, Cooperative Agreements, Government Contracts; Bilateral; Multilateral; UN; EU...

b. Role of Religion and Faith in Global Development
i. **SDG Goal 16: Peace, Justice and Strong Institutions**
   ii. Issue of Passive and Complicit vs Active and enabling a Voice
   iii. Issue of Ideology vs Identity (Arab Spring, Middle East Crisis, Saudi Arabia...)
   iv. Increased understanding and appreciation for role of Religion and Faith in positive and sustainable outcomes if well managed
   v. Increased attention on Doing No Harm
   vi. Decreasing tolerance vs Increasing Nationalism in OECD countries – extreme left and right-wing politics – a dangerous future
c. Emergency and Disaster Response
   i. No SDG, but supported by the Istanbul 2016 World Humanitarian Summit – specifically the “Agenda for Humanity” Framework
   ii. Agenda for Humanity Framework: [https://www.agendaforhumanity.org/](https://www.agendaforhumanity.org/)
      1. Agenda #1: Prevent and End Conflicts
      2. Agenda #2: Respect Rules of War
      3. Agenda #3: Leave No One Behind
      4. Agenda #4: Work Differently to End Need
      5. Agenda #5: Invest in Humanity
   iii. 1980 vs 2018
   iv. Larger and Longer, more complex and complicated, more frequent and repeated, black swans and the unknown-knowns...
   v. Shift to digital responses
   vi. Humanitarian Logistics and Fleet Management - still essential capabilities
   vii. Bilaterals still counting on INGOs to remain active in emergency responses
   viii. Collaborative skills, Business skills, Entrepreneurial mindset, Technology and Innovation in all aspects of disaster response
   ix. Back room and Front room core capabilities
   x. Disaster Management Cycle: Preposition, Mitigation, Preparedness, Response, Transitions, and Rehabilitation/Reconstruction

3) General Interest to All Students
   a. Top 11 Mega-trends
      1. The Face of AID is radically Changing
      2. There is an accelerating Rise of Middle Income Countries (MICs)
      3. Climate Change, Food Insecurity and Shocks will continue to drive the largest threats
      4. Much of the world’s population is Ageing and the face of Global Health will radically transform
      5. Religious Polarization will continue to escalate often with divisive effects
      6. Most of the world’s population will be Urbanized and Migration will accelerate
      7. The world is the most Unequal it has ever been and Economic Inequality will persist
      8. Peak Children has been reached yet Vulnerability of Children and Youth in particular will continue to accelerate, especially in Fragile Contexts (both state and city)
      9. Evolving forms of Business Engagement in the Bottom of the Pyramid population will dominate the new global development agenda
     10. Donor Expectations are radically shifting adding increasing demands and new models for development
     11. Global Connectivity and Technologies will radically transform the way the world operates creating unscaled disruption and innovation

b. Partnerships, Collaboration and Innovation
i. Global Development design, resourcing and implementation will largely be achieved through Partnership, Collaboration and Platform Business Models

ii. 20th century traditional single-agency Business Model will mostly disappear

iii. 20th century traditional AID Models used to be 80% Civil Society Actors – 20% other

iv. 21st century new hybrid AID Models will be 20% other and 80% Private and Public Sector – a complete reversal of roles

v. This is a good thing to Accelerate and Scale Global Development if managed well

vi. Much of this new Collaboration and Partnering will occur in the emerging “4th Sector” space – an emerging space requiring new skills and capabilities, plus new hybrid and blended Business Models

vii. The Church (SDAs especially) have an incredible Global Network by which and through which Global Development Interventions can be implemented if it chooses to more effectively engage and channel its resources

c. The “China Factor”

i. More Chinese have come to Africa in the past 10 years than Europeans in the past 400

ii. China poured more concrete in the past 3 years than the United States did in the 20th century

iii. In 2015, China signed the largest contract in the world’s history – to build out the complete Transport Infrastructure on the African Continent

iv. There are already now, more self-declared Christians in China than those registered in the Communist Party

v. The Chinese Judicial System is already staffed by more than 50% Christian Legislators and Judges

vi. By 2025, China will have more Christians than the rest of the Christian world combined

vii. By 2030, China will be sending more Christian Missionaries to the world, than the rest of the Christian world combined

POV:

"We need a new type of development approach, free of the constraints, mindsets, limitations and compromise of today’s norm. The prevalent ‘charity/aid’ model is clearly creaking. It’s failing both to capture the imagination of the emerging generations and to enable sustainable transformation for people in poverty. The co-dependency between donor and aid actor stifles innovation and creativity. We’ll never ignite the new from within the old. We need to start over with a new slate.

Architects and entrepreneurs need to convene to frame the new - naming, connecting, nourishing, illuminating the emergent new ingredients of the ‘beyond aid’ actor. We’re fairly sure we know about some of the ingredients - market-based mechanisms, patient capital, donors becoming investors, voice of the poor in the driving seat, disciplined and transparent intermediation spend, real impact measurement that has meaning to front-line communities and investors alike. Other ingredients are still to be uncovered.”
Over the next 5 years we will see many 20th Century organisations either shrink or disappear. Some of these however, will be able to Reimagine their roles to mirror 21st Century needs, adjust their approaches, align themselves to be “21st-Century-Fit” and be Relevant. Many new organisations will emerge. And many new Hybrid Models will become the new norm.

**BENEFIT:**
Shifts will strengthen and improve the overall Impact of short and long-term Development Efforts and introduce much greater efficiencies.

New actors, new capabilities and new forms of resourcing will emerge that are much better at addressing Speed and Scale.

New entrants into the Global Development Market, will be able to contribute from a distance via digital platforms, cyber mechanisms, and digital work.

New Market Capital will accelerate and replace old charity and philanthropic approaches leading to Macro interventions with long-term and sustainable solutions.

New levels of Decision-making will transfer from the wealthy and powerful to those actually affected by vulnerability or disaster. Beneficiaries and victims will be at the centre of planning, design and implementation. Global will shift to local and where often a combination of both is applied – or “Glocal”.

**SHARP:**
In our world of accelerating complexity, we must recognize that the rapidly changing landscape isn’t the real enemy of aspirational futures, but rather it’s our mental maps that are tuned to a way of thinking and acting that worked in the previous era. What we need now isn’t better teaching on mindsets that were successful in the last economy. *We need to shift our models.* Businesses, organizations, innovators, and entrepreneurs will need a new platform from which to operate.

Each of you have likely made your career choices or will be doing so in the coming months. Your own personal experiences and now here at Walla Walla University, have undoubtedly equipped you with many of the tools you will need as you launch yourselves into a new phase of your lives.

As for me, I have seen and been part of accelerating change for the past 50 years. The world is hardly recognisable. For you, mega-changes will be part of your new norm.

My father left me with some advice early on in life that I would like to pass on to you – he said: *you have a lifetime to learn….so keep doing that….but if you really want to make a difference to this planet and to people’s lives*, “what you do is much more important than what you know”. He placed a real premium on experience, on hard-work, and the practical.

In 1st Chronicles, 4:10 (NIV), Jabez cried out to the God of Israel, “Oh, that you would bless me and enlarge my territory! Let your hand be with me and keep me from harm so that I will be free from pain.” And God granted his request.
In my view, one way to interpret the request by Jabez, and God’s answer to him, is to accept that nothing is too difficult nor too impossible. If we submit to Him, as Jabez did, He will “enlarge your territory”. And so now at this juncture in your lives, may I challenge you to submit this same prayer to Jesus and He will equip you according to His will and plans.

Thank You.