

A BUSINESS ECOSYSTEMS MODELING OF WEST AFRICA'S PORT SUPPLY CHAIN

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Abstract

- The work assesses the logistics challenges of West Africa's traders applying the business ecosystem's model and to review the logistics challenges and the supply chain concept of West Africa's port supply chain .Digital business ecosystems framework as well as the inclusive business ecosystem's model were applied to further develop West Africa's Port community.




Introduction

- Traders in West Africa form an ecosystem that interacts with each other in a dependent hierarchy. While this hierarchy has been studied in Europe, the nature of the business ecosystem operating in West Africa is yet to be understood.
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Business ecosystem: A strategic collaborative model for the government

- The model should be used as a decision support tool for government agencies in the ports, logistics and allied supporting freight forwarding sector in planning for improvement and development more so in this age of a digital ecosystem regime
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The need for a digital business ecosystem framework in West

Africa The supply chain of activities taking place in this sector affect the cargo flow from the factory at the point of production through the transportation network, the logistics support network of a clearing and forwarding agent transiting through the port agent and the shipping company for an international good as it makes its journey to the export or import market. Digitalizing activities for easy interactions among the members of the maritime business ecosystem of West Africa is thus very important

Objective

- In this work therefore an attempt will be made to do a mapping of members of West Africa's maritime business ecosystem.
- Methods for the digitalizing of activities in for members of the maritime business ecosystem environment of West Africa will be sought.
- Methods for creating an efficient and responsive interactive behaviour among members of the maritime business ecosystem's pool will be sought using an inclusive business ecosystem's approach.



Definition of business ecosystem

- A business ecosystem has been defined as a dynamic structure of interconnected organizations that depend on each other for mutual survival. The term was coined by Moore whose concept of business ecosystem includes those typically considered to be part of a corporation, consisting of those inside the organization's walls plus distribution channels and direct suppliers.

Definition continued

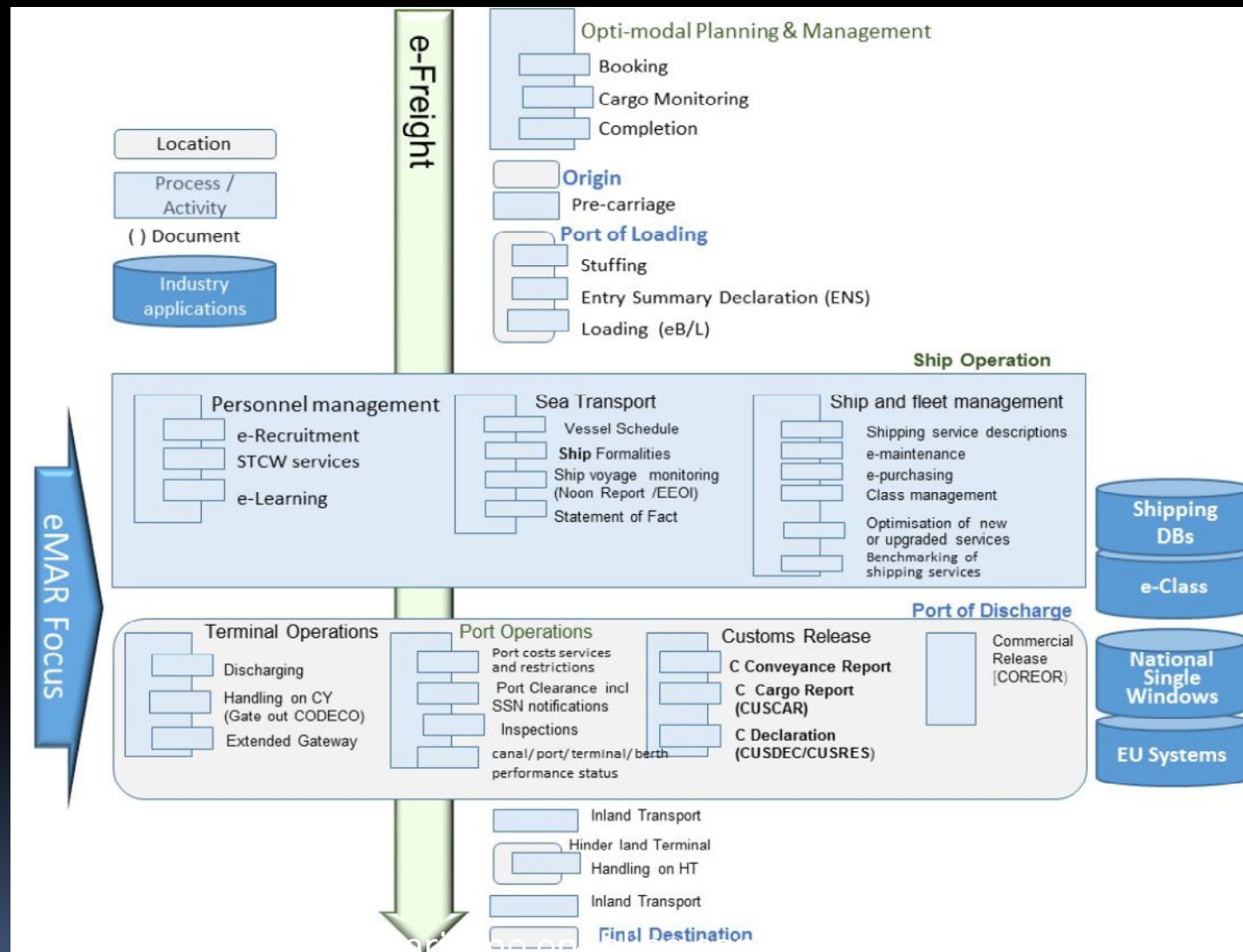
- The term “ecosystem” is taken from ecology, where it refers to a community of organisms that depend on one another and a shared natural environment. Strategist James Moore coined the term “business ecosystem” in a McKinsey Award-winning *Harvard Business Review* article in 1993. He observed that firms, too, depend on communities of interconnected, interdependent stakeholders, including suppliers, distributors, retailers, customers, companies selling complementary products, competitors, investors, trade associations, regulators and other government agencies, educational institutions, the media, and others. He also suggested that, unlike most organisms, firms could strengthen their business ecosystems in ways that support their long-term growth and competitiveness

Maritime Business ecosystems in the EU.

- Much work has been done in the European Union to address the ecosystem behavior in the maritime sector of Europe. Foremost among them is the eMar which implements a wave of new collaboration mechanisms of dynamic virtual organizations started in the last decade, in the direction of creating dynamic business ecosystems that integrates advances in computing and communication technologies, innovative collaborative business models and organizational forms into the maritime sector.

Business ecosystem in the EU maritime strategy

- The pillars of the eMAR enabled collaboration are: (i) Connectivity and Communications, (ii) the Reference eMAR Strategic Framework, EMSF and (iii) the resulting Collaborative Platforms based on the developed ecosystems infrastructure. EMSF is the basis of setting up business ecosystems. Also in existence are communities which define the processes and message types of the information exchanged between ecosystem participants. (Inlecom and Palaskas 2015)

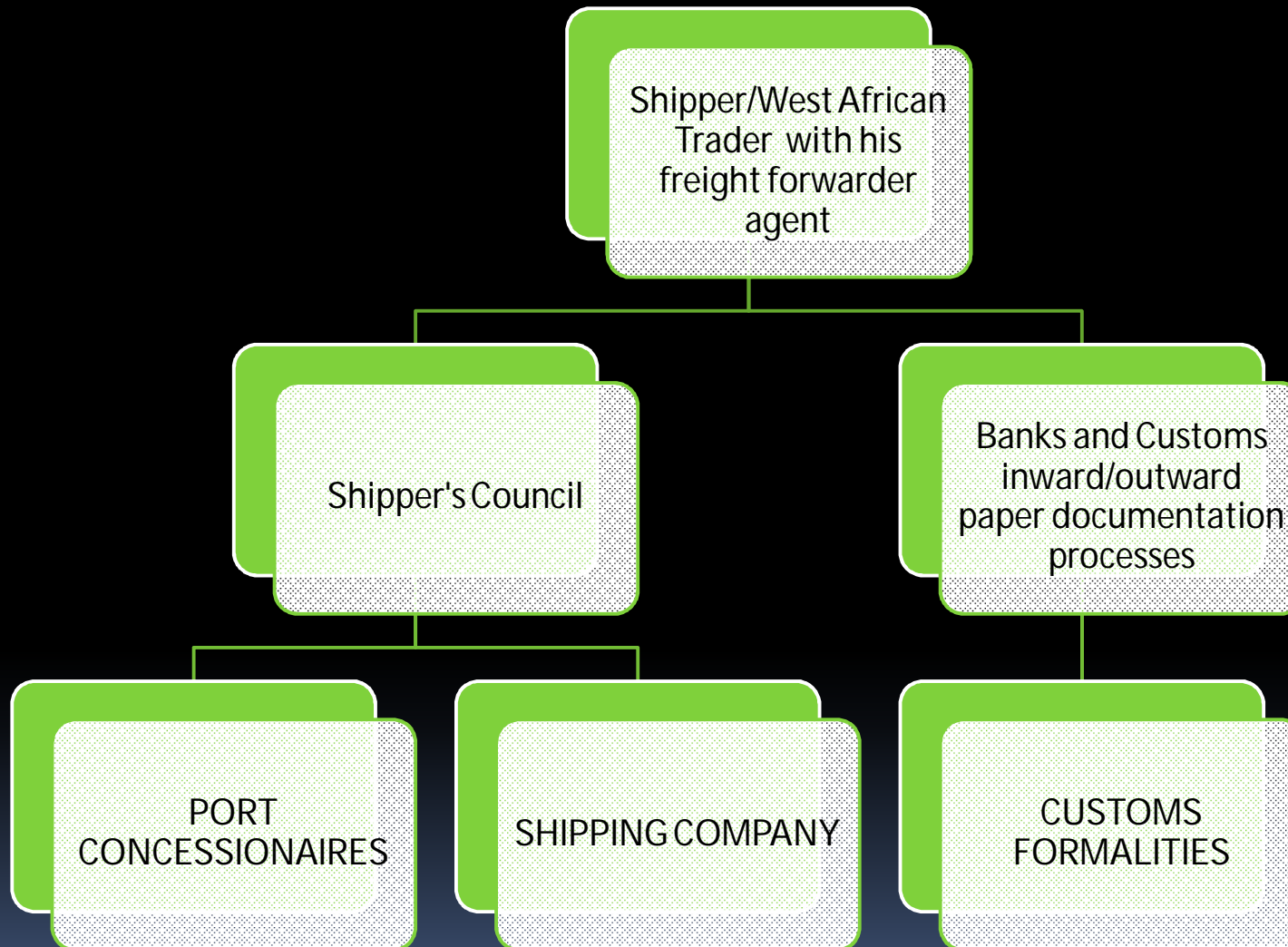


e-maritime enabling connectivity and cooperation in shipping in the European Union
 Source: Inlecom, K., Palaskas, Z
<http://www.pennel.eu/>

Mapping of members of West Africa's maritime business ecosystem

- A form of ecosystems behaviour does actually exist among West African traders. The network however cannot be described as a digital business ecosystem like the one in the European Union; it certainly possesses characteristics of a functional business ecosystem's infrastructure. West African traders operating in the port and shipping environment operate as an ecosystem in virtually all market interaction. A study of the Nigerian trader's shipping and port operator's business ecosystem infrastructure will be used to describe a maritime business ecosystems model of the West African trader.

Import and Export framework in West African trader's business ecosystem model



Hierarchical relationship in the business ecosystem

- The expressed diagram shows the existence of a hierarchical relationship in the business relationship of the ecosystem. The hierarchical relationship is also found in the interaction between traders as they relate with each other along the distribution channels in the market place thus creating producer, importer, wholesaler, distributor, retailer and finally the consumer or customer.






The West African Trader's Business Ecosystem map

- In this case the ecosystems' map of the trader will then be represented
- as a chain of activities along a straight line. In West Africa, the small medium scale enterprises SMEs constitutes a substantial part of the ecosystem. The activities of these SMEs cut across the various maritime sectors in West Africa' shipping community traversing the entire coast of West Africa, thus it is not uncommon to see a freight forwarding agent (logistics service integrator) operating in three international West African ports at the same time.

The Logistics service Integrator/freight forwarder in the business ecosystem's map

- The reason for this can be attributed to the attractive pull effect of low cost ports/efficient ports in the region. Thus a West African importer will be attracted to a port where he senses lower overall tariff in the port. This keeps the logistics service integrator this time the freight forwarding agent always on the move to serve the interest of his client in the port ecosystem.

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- A port community business ecosystem that is digital is necessary at this moment if technical changes must be recorded in this subsector. A custom's processing system that is user friendly and visible to shipping companies and port authority is required at this stage to digitalize the sector.

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- Inclusive business ecosystem has been suggested as one way of including the poor in the line of international business networks of large corporations. Prahalad and Stu Hart (2002) spotted a possible “fortune at the bottom of the pyramid.” Most of the global population was poor, they pointed out – and their collective purchasing power was both significant and largely untapped by the mainstream business sector. Since then, great momentum has grown up around the concept of doing business with the poor.

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INCLUSIVE BUSINESS ECOSYSTEM'S MODEL

- This theory is very applicable to West Africa's business ecosystems framework considering the number of small and medium scale industries in the region. These SMEs which constitutes the bottom of West Africa's business ecosystems' framework needs to survive considering the fact that they constitute a link in the tail end of the supply chain of the international business ecosystem. An inclusive business framework is thus necessary to sustain the activities of the West African trader at this moment.

Members of the inclusive business ecosystem's pool

- **Individuals** purchasing goods and services as consumers, providing goods and services as producers, investing in businesses, and engaging in myriad other activities as employees and citizens.
- **2. Companies** engaging in research and development, commercializing new products and services, purchasing from and selling to other companies, providing financing solutions, investing in new operations and infrastructure, creating standards, competing against
- other companies, and lobbying the government (often together with other companies via associations).
- **3. Governments** adopting new policies and regulations, adjusting tax codes, and improving public services like health care, education, and in some countries,
- provision of energy, water, and sanitation

Members of the inclusive business ecosystem's pool continued

- **Associations, cooperatives, unions, standards bodies and other intermediaries**
- providing services such as information or access to markets to their members, and representing member interests towards others – above all the government.
- **Non-governmental organizations** raising consumer awareness and trust, setting environmental and social standards, changing social and cultural norms, informing government policy reform, and creating training facilities.

Members of the inclusive business ecosystem's pool continued

- **Public and private donors** building the capacities
- of farmers(freight forwarding agents) and producers, providing catalytic financing to companies and entrepreneurs, and advising governments on how to improve market
- environments.

Members of the inclusive business ecosystem's pool continued

Academic and other research institutions

undertaking on basic research that will ultimately benefit all players in a market, analyzing what works and what doesn't in either the business or policy spheres, creating knowledge that other actors may have neither the time nor incentive to do, and making sure it is disseminated

- **8. The media and other trend-setters** raising awareness, influencing social and cultural norms,
- providing information, and creating momentum for change. Gradi and Jenkins (2011)

Involvement of Academic Institutions in the Inclusive Business ecosystem.


- From the inclusive business ecosystem thus presented roles exists for every member of the ecosystem to complement each other ensuring survival of the entire ecosystem. The private sector as well as the government has roles to play in the development of the entire ecosystem. Academic institutions also have roles to play in the sector to drive it to survival. The lowest ebb of the ecosystems pyramid constitutes mostly of poor and less knowledgeable fellows who pull down the system. Academic institutions as part of the ecosystem should provide relevant professional knowledge to educate the ecosystem members.

Emerging Ecosystems in West Africa, Nigeria

- Nigerian Content Consultative Forum(NCCF) formed by Nigerian Content Development and Monitoring Board.
- The constituent members meet four times in a year to discuss issues relating to business and development in their sector.
- The Bank of Industry of Nigeria just approved a \$100 million dollar funding for the sector to encourage the growth of indigenous firms in the sector.



Ghana

- Ghana Artisanal fishing community. The government of Ghana recently approved funding for members of the fishing community to acquire more outboard engines.
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CONCLUSION

- Nigerian maritime business ecosystems community is urgently necessary to unite the member of the maritime business ecosystem in an inclusive fashion. Nigerian Shippers Council will play an important role here.
- This ecosystem should extend to the West African frontier to join all maritime ecosystems in the West and Central African port community. Port Management Association of West and Central Africa should take the lead in this area.



Information page

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Lord Jesus Christ commands the fish community

- **7 Luke 5:1-8**
- And he entered into one of the ships, which was Simon's, and
- prayed him that he would thrust out a little from the land. And he
- sat down, and taught the people out of the ship.
- Now when he had left speaking, he said unto Simon, Launch out
- into the deep, and let down your nets for a draught.
- And Simon answering said unto him, Master, we have toiled all the
- night, and have taken nothing : nevertheless at thy word I will let
- down the net.
- And when they had this done, they inclosed a great multitude of
- fishes : and their net brake.
- And they beckoned unto *their partners, which were in the other*
- ship, that they should come and help them. And they came, and
- filled both the ships, so that they began to sink.
- When Simon Peter saw *it, he fell down at Jesus' knees, saying,*
- Depart from me ; for I am a sinful man, O Lord.

References

- Inlecom, K., Palaskas, Z. The eMar system-a new way ahead for interoperable platforms; Emar and Inlecom systems
- Gradi and Jenkins (2011) Tracking the Barriers to Scale; From Inclusive business models to Inclusive ecosystems; Harvard Business School and CSRIT PPPP
- Beth Jenkins, Richard Gilbert, and Piya Baptista (2014) **Sustaining and Scaling the Impact of Enterprise Development Programmes** SABMiller's Approach to Strengthening Business Ecosystems; CSR Initiative at the Harvard Kennedy School and Business Fights Poverty
- Prahalad, C.K. and Stuart L. Hart (2002). "The Fortune at the Bottom of the Pyramid." *Strategy+Business* 26, p. 54-67.



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