# ICTs for **REGIONAL TRADE AND INTEGRATION** in Africa

eTransform **AFRICA**

This document, on the use of ICTs for Regional Trade and Integration in Africa, is the summary of the full thematic study which was carried out by a team from *ict* Development Associates led by David Souter and comprising Lishan Adam, Abiodun Jagun and Tusu Tusubira. The full report is available at www.eTransformAfrica.org. This document forms chapter eight of the publication edited by Enock Yonazi, Tim Kelly, Naomi Halewood and Colin Blackman (2012) "eTransform Africa: The Transformational Use of ICTs in Africa."

Funding for the publication came from the AfDB Korean Trust Fund, the WB Pfizer Trust Fund and the WB Africa regional department.

**eTransform AFRICA**

# ICTs for **REGIONAL TRADE AND INTEGRATION** in Africa

*Information and communication technologies (ICTs) have the potential to transform business and government in Africa, driving entrepreneurship, innovation and economic growth. A new flagship report – eTransform Africa – produced by the World Bank and the African Development Bank, with the support of the African Union, identifies best practice in the use of ICTs in key sectors of the African economy. Under the theme "Transformation-Ready", the growing contribution of ICTs to Agriculture, Climate Change Adaptation, Education, Financial Services, Government Services and Health is explored. In addition, the report highlights the role of ICTs in enhancing African regional trade and integration as well as the need to build a competitive ICT industry to promote innovation, job creation and the export potential of African companies.*

ICTs for
**REGIONAL TRADE AND INTEGRATION**
in Africa

# 1

# INTRODUCTION

# Trade, regional integration and Africa's development

Trade is critically important to Africa's economic prospects, as a source of revenue, investment and employment, yet Africa's trade is highly fragmented and the weakness of its trade performance constrains growth and poverty reduction. Africa today generates only about 2.5-3.5 per cent of world trade. African countries mostly export primary commodities while importing manufactured goods, from Europe, North America or developing regions outside Africa. Only about 10 per cent of Africa's trade is exchanged within the continent, a much lower proportion than in other world regions. Small domestic markets, landlocked status and limited natural resources restrict the trade potential of many countries. These structural factors inhibit the development of manufacturing sectors which could supply both African and world markets.

Two factors are important in addressing Africa's trade problems. First, trade costs on the continent are higher than in other regions, making African exports less competitive both on the continent and globally, while also raising the cost of imports. Second, formal tariff barriers have fallen but non-tariff barriers are considerable. Critical factors include:

- inadequate transport and other infrastructure – ports and airports, roads, railways and river routes – particularly for the continent's sixteen landlocked countries;
- complex, unnecessary and inconsistent non-tariff requirements at ports of continental entry/exit and border-crossing posts;
- inefficient and uncoordinated management of trade, both within countries and along trade routes; and
- inadequate information about trade requirements and import/export opportunities.

These challenges result in three main problems for trading businesses:

- increased costs (including fees, bribes and management expenses);
- delays in the transit and delivery of goods, which add further transport and warehousing costs; and
- unreliability, resulting from inaccurate data management.

Transit times for African consignments between point of origin and continental ports are substantially higher than those in other regions, and African countries perform poorly against the World Bank's Logistics

Performance Index. A recent World Bank report suggests that the continent is losing billions of dollars in revenue as a result.

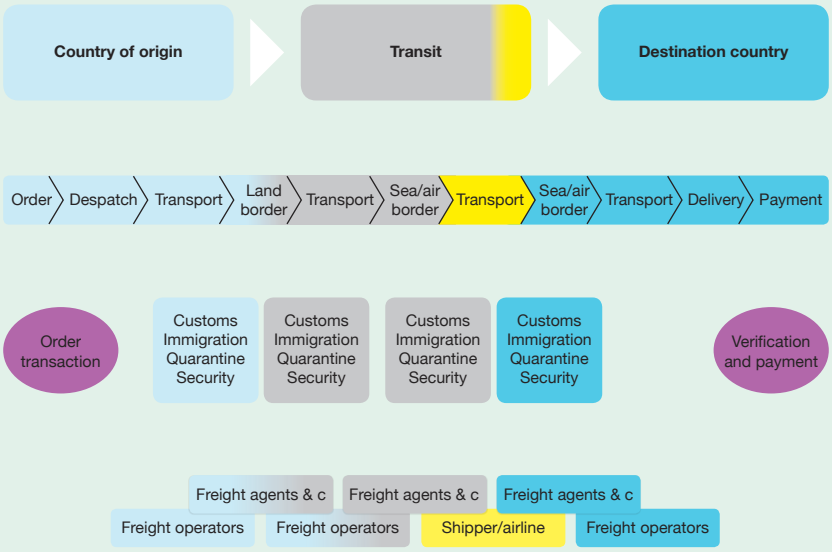
Regional integration is crucial to reducing non-tariff requirements and improving cross-border infrastructure and coordination, which in turn reduce trade costs and improve trade performance. The African Union supports regional integration through eight Regional Economic Communities (RECs)[1], which have some overlapping membership. Some of these have implemented free trade zones and four (COMESA, EAC, ECOWAS and SADC) have implemented or are implementing custom unions, with further progress anticipated towards common market principles. The remaining RECs have failed to achieve comparable integration.

Trade barriers are strongest at critical points along the supply chain between producers and consumers of goods and services, particularly points of entry/exit between countries. These are illustrated in Figure 1, together with the main actors involved at each stage.

1. The Arab Maghreb Union (AMU), the Community of Sahel-Saharan States (CEN-SAD), the Common Market for Eastern and Southern Africa (COMESA), the East African Community (EAC), the Economic Community of Central African States (ECCAS), the Economic Community of West African States (ECOWAS), the Intergovernmental Authority on Development (IGAD), and the Southern African Development Community (SADC).

Figure 1

## Supply chain model between producers and consumers




# ICTs and trade facilitation

Trade facilitation aims to simplify, harmonize and standardize processes in order to minimize the delays and costs incurred at bottlenecks and to improve reliability for both trading businesses and governments. ICTs are crucial to trade facilitation for three main reasons:

- they improve the efficiency with which trade transactions are handled, improving transparency and accountability, reducing the cost of human interfaces, eliminating delays and reducing the scope for corrupt interactions between traders and officials;

- they improve coordination between different actors in the trade management process, particularly between government agencies within

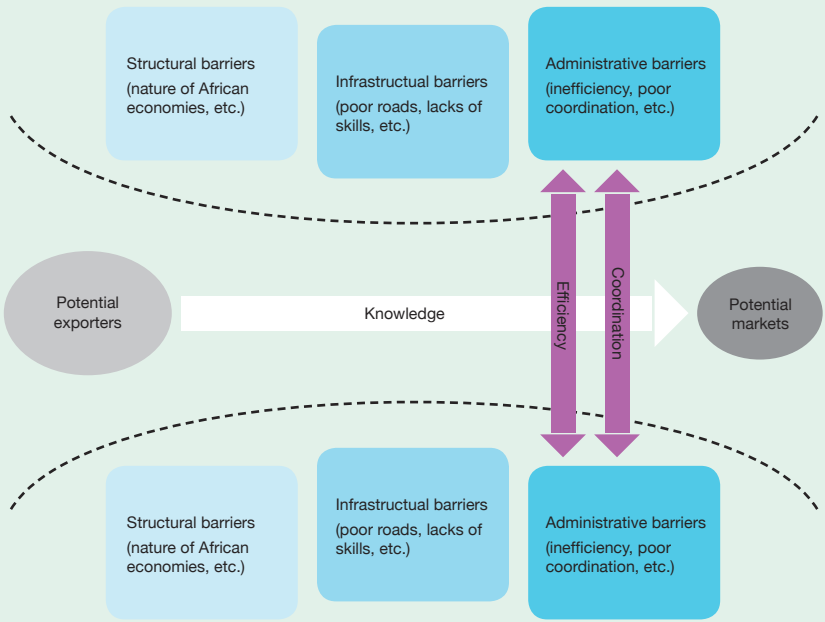
individual countries, and across national borders;

- they improve the information and knowledge about trade processes and markets which are available to businesses, enabling them to manage consignments more efficiently and to enter new markets at lower risk.

ICTs are therefore important inputs to the enabling environment for cross-border and regional trade. They cannot directly address the structural and infrastructural deficits which undermine Africa's trade performance but, in these three ways, they can reduce the administrative barriers that contribute to costs, delays and unreliability. Their effectiveness will be greatest when they are integrated with other measures to address the structural, infrastructural and non-tariff barriers that also inhibit trade. Their contribution is illustrated in Figure 2.

Figure 2

**The impact of ICTs on trade facilitation**



ICTs for
**REGIONAL TRADE AND INTEGRATION**
in Africa

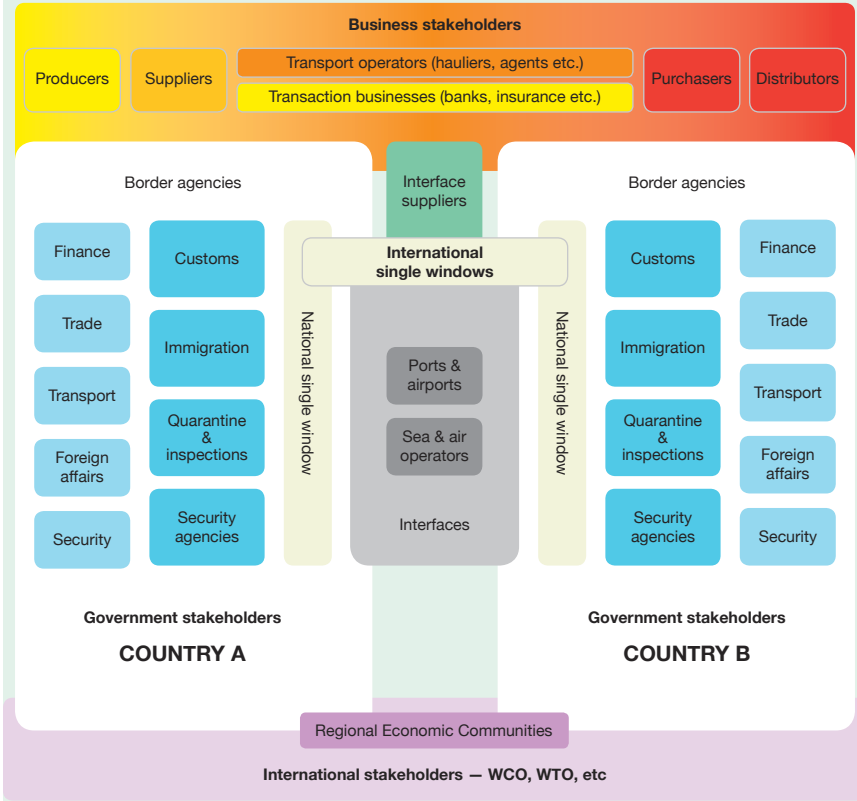
# 2

# LANDSCAPE ANALYSIS

Cross-border trade involves a large number of different stakeholders, as illustrated in Figure 3. As well as the principals (the suppliers and purchasers of goods), these include at least four government agencies in each of the countries through which a consignment travels (customs, immigration, quarantine and security, abbreviated to CIQS), together with a variable range of other agencies in individual countries), port and airport authorities, freight businesses, banks, insurance companies and other businesses and agencies.

Figure 3

## Stakeholders in cross-border trade



Trade processes, as a result, are highly complex systems in which many different stakeholders interact. The most significant ICT applications are likewise large and complex systems with a higher degree of centralization and information-sharing than in most ICT/development sectors, although these also increasingly rely on internet and other networks and benefit from the spread of mobile and other personal ICTs.

Experience in ICT applications for trade is most advanced in industrial countries and global trading centres, particularly in Europe, North America and Asia. The most widespread use of ICTs in African trade is in customs automation, though there is growing experience of other ICT deployments along the supply chain, such as consignment tracking and port management, particularly in countries with major seaports such as South Africa, Kenya and Senegal. Global experience of ICTs in trade is increasingly based around single window principles, which allow for the sharing of data between government and business actors throughout the supply chain. African experience with single window principles, and the processes that put them into practice, is limited but growing.

As indicated above, the main trends in the use of ICTs for trade exploit their capacity to improve efficiency, coordination and information resources available to trade stakeholders, thereby reducing costs and delays while improving reliability. Eight main types of application are identified. Three of these are principally concerned with improvements in the efficiency of trade and supply chain management:

- The automation of customs administration was the earliest major application of ICTs in trade, dating from the 1980s. Automated customs systems expedite the clearance, and thereby transit, of goods while improving identification of suspect consignments and raising revenue collection rates. The ASYCUDA customs management system pioneered by UNCTAD has been adopted in more than thirty African countries, while other countries (including Mauritius, South Africa, Kenya and Senegal) have preferred systems specifically designed for their own national contexts or other off-the-shelf systems which they believe give them greater flexibility. Recent customs automation programmes aim to incorporate online payments and to move trading businesses towards paperless trade based on digital data shared along the supply chain through single windows.

- Transport corridors play a significant part in trade logistics in Africa, particularly for landlocked countries. While the most substantial challenges along transport corridors are often infrastructural, the multiplicity of administrations, government agencies, permit issuing authorities and others along these routes causes substantial delays. A survey in West Africa indicated an average of about three checkpoints per hundred kilometres along major trade routes.

Advance information on the movement of goods, people and money reduces the need for checkpoints, expedites transit at those remaining, and reduces the incidence of fees and bribes. Electronic cargo tracking systems using Radio Frequency Identification (RFID) and Global Positioning Systems (GPS) technology are becoming more widespread.

- Enforcement is an essential part of trade management, largely dependent on inspection regimes. Tracking systems, data management, and data sharing through ICTs enable CIQS agencies to focus inspection resources, with intelligence-led inspections taking the place of random selection or universal examination of consignments. Where well implemented, this results in higher levels of security from fewer stoppages, raising revenue while reducing delays for the majority of trade in transit. It is, however, highly dependent on the quality of data shared.

Three trends in ICT-enabled trade facilitation are principally concerned with improved coordination between government and other stakeholders:

- Border management is a complex multi-agency environment involving CIQS agencies enforcing tariffs and non-tariff regulations with the aims of safeguarding lawful trade, identifying and preventing illegal trade, and ensuring national security. The data-sharing and coordination capabilities of ICTs enable CIQS agencies in individual countries to integrate and synchronize inspection processes, share customer-facing systems and core databases, and thereby reduce transit times at border crossing-points from days to hours.

- Integrated cross-border management (ICBM), coordinating the activities of CIQS agencies on both sides of border crossings, adds greater complexity which can only be managed effectively through the data-sharing enabled by ICTs backed by supporting intergovernmental agreements. The most effective deployments of ICBM – just beginning to appear in Africa – include one-stop border posts, where joint operations of both countries' CIQS agencies, backed by intelligence-led transit management, implement single inspection regimes.

- The most complex trade environments are those at ports and airports, where multiple actors – including shipping lines and agents, freight forwarders and brokers, transport operators and port administrations, as well as CIQS and other border agencies – form highly complex "port communities". Consignments passing through ports and airports undergo many different operations and movements before onward transit to their final destinations. In the past, these multiple processes were coordinated manually. ICTs have enabled them to be coordinated electronically, increasing efficiency and reducing delays. Governments

and businesses in ports worldwide have implemented Port Community Systems (PCS), often as joint ventures, to maximize the value derived from ICT-enabled systems, and these are now being deployed at major ports in Africa. Similar Cargo Community Systems (CCS) are being implemented in airports.

Two further trends are principally concerned with information and transactions:

- Trade processes involve extensive transactions between trade principals, businesses involved in freight transport and logistics (such as insurance companies), customs and permit issuing authorities. Many of these are international transactions. ICT-enabled data-sharing allows transactions to be automated and digitally recorded, reducing the need for data-checking and face-to-face interactions that are susceptible to corruption. Online payments are increasingly common in PCS and CCS, while micropayments are increasingly made by mobile phone. These applications can significantly reduce the gross cost of transactions relating to consignments along the supply chain.

- African businesses have often been deterred from engaging in cross-border trade by lack of information about trade requirements (non-tariff barriers), export opportunities and goods available for import from neighbouring countries. Internet-based trade portals, some implemented through Regional Economic Communities, are improving information available to potential trading partners and enhancing scope for intra-regional trade. While information resources cannot overcome structural limitations in African economies, they can increase opportunities for trade and cooperation between trading businesses in neighbour countries.

Many of the trends described above rely on the potential for ICTs to:

- replace the need for data on consignments to be entered at multiple points along the supply chain with a single data entry point; and

- share the resulting data between all stakeholders that need access to them either within particular communities or along the supply chain as a whole.

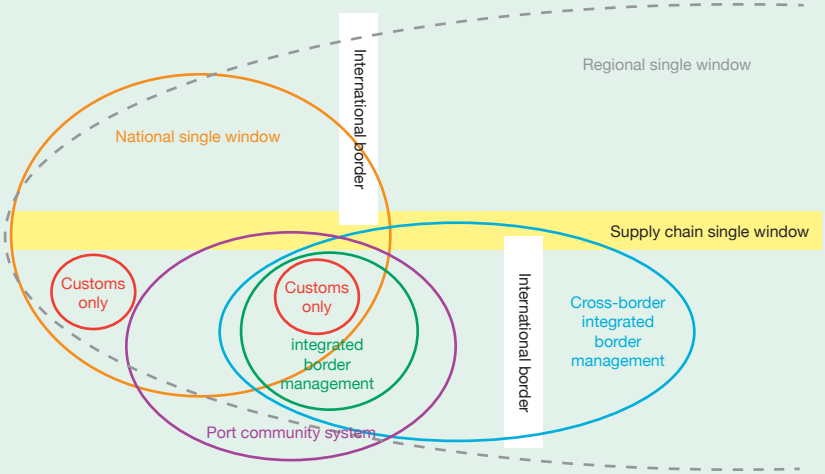
These are coalescing into a meta-trend in trade facilitation, which is the integration of trade management processes into ICT-enabled "single windows", integrated systems which allow all parties involved in trade transactions to lodge standardized documentation through a single entry point, and to share such data as required along the supply chain, both within individual countries and across national borders.

The implementation of single window principles in practice depends on close cooperation between government and business stakeholders. Implementation can occur in localized environments such as border crossings, PCS and CCS;

at national level, involving trade and transport businesses as well as government agencies and trade principals; and at regional level, for example along entire trade corridors or on trans-oceanic transit routes. The various types of single window process are illustrated in Figure 4.

Figure 4

**Single window variants**




Transition towards a single window process is a major trend in trade facilitation worldwide, and an increasingly important goal for trade facilitation in Africa. A fully integrated single window process at national level is a highly complex arrangement involving many different government departments and business actors. Gradual integration of systems is therefore usually preferable to a "big bang" approach.

This can begin with adoption of the principles of data gathering and sharing that underpin single window processes, build over a period of time through implementation of processes at critical points along the supply chain, and lead over time to fully-integrated national systems. In Kenya, for instance, the sharing of data between the Kenya Revenue Authority (KRA) and the Kenya Port Authority (KPA) was a critical early step towards initiating a single window. Data-sharing can also begin to take place across borders from a relatively early stage where both countries concerned have appropriate and compatible automated customs systems, though data-sharing in other CIQS functions may take longer to establish as automation in these is less well established.

ICTs for
**REGIONAL TRADE AND INTEGRATION**
in Africa

# 3

# OPPORTUNITIES AND CHALLENGES

The opportunities arising for Africa from the trends described above are considerable, but there are also substantial challenges to bringing them about. These challenges, and the time required to overcome them and deploy new systems, should not be underestimated. In particular, new systems are unlikely to be effective if they are not associated with reforms in the organization and management of trade administration which simplify procedures and eliminate bureaucratic inefficiencies.

Africa's poor trade performance derives from a number of factors. Some of these are structural factors related to the continent's resource base (in terms of raw materials and human skills) and political and economic contexts (such as regional conflict and varying degrees of regional economic integration). Some are infrastructural, related to inadequate port, transport, power and communications facilities, whose improvement is often dependent on investment by international financial institutions (IFIs) and development partners. Some, however, are the result of inefficiencies, poor coordination and limited information resources, all of which are susceptible to improvement by the deployment of ICTs. ICTs can alleviate some of the constraints undermining Africa's trade performance, opening up new opportunities for trade to generate employment, investment and growth, though their overall impact will depend on the extent to which governments and development partners also address the structural and infrastructural challenges which beset African trade performance.

The value of ICTs in trade facilitation derives, to a larger extent than in most development sectors, from the implementation of large-scale systems which are increasingly networked and thereby leverage the efficiency and coordination gains that can be achieved through system-wide data-sharing and data management. The engagement of all stakeholders in the trade environment is required to maximize these gains: experience worldwide suggests, for example, that complex applications such as PCS are often best implemented as public-private partnerships which draw on the expertise, address the needs and secure the support of both government agencies and trading businesses. Businesses also gain value from exploiting the potential of ICTs within their own systems, for example by using electronic transactions and by enhancing communications with employees and business partners, and from ensuring that their systems are compatible with official applications for cargo tracking, customs administration and e-commerce.

The adoption of single window principles and the gradual development and implementation of single window processes offers the greatest potential value for ICT-enabled trade facilitation in Africa. The structural and infrastructural deficits of African trade are exacerbated by inefficiencies that result from poor data sharing, inadequate coordination and low standards of administrative practice, including

corruption. By building trade processes around a single point of entry, which governs progress of a consignment along the supply chain, single window systems reduce the number of interventions and inspections required from government agencies, eliminate many of the errors that appear in manual documentation, allow resources to be targeted on suspect consignments, enable more secure collection of fees and customs revenue, and reduce the time required for transit.

Particular opportunities for ICTs in trade arise through the continent's Regional Economic Communities, the agreed framework for the development of economic integration on the continent, including trade promotion, and the logical framework therefore for the implementation of regional single windows. Trade is, by definition, dependent on cooperation between governments and businesses in more than one country. Africa's more successful RECs have sought to promote regional trade through the creation of free trade zones (one of which now covers the combined COMESA-EAC-SADC region), the development of customs unions (with a common external tariff), and preliminary agreement on progress towards a common market which enables the free movement of people and capital together with freedom of business establishment, extending free trade principles more fully to trade in services.

While single window processes have value at a national level, they have greater potential value at a regional level where a single point of data entry and data-sharing can cover the entire transit route for goods with regional destinations and transit between landlocked countries and their continental points of import/export. Some cross-border data-sharing is already taking place, for example between customs agencies, and this can provide evidence for further progress. The development of regional single windows, however, will require high levels of intergovernmental cooperation. The more successful RECs are therefore better placed to move towards this goal. Progress towards regional ICT-enabled trade is evident in the COMESA, EAC, ECOWAS and SADC regions, but much less evident in other regions where RECs have been unable to achieve significant integration. Where RECs do achieve progress in trade facilitation, this can provide a model for ICT-enabled integration in other economic and social sectors, particularly where it builds on improvements in regional communications infrastructure.

However, ICTs are not able to transform trade performance on their own. The benefits described above are dependent on other factors, such as the quality of data input into single window processes, the compliance of trading businesses, and the modernization of administrative systems. Evidence in the report emphasizes the following challenges which need to be addressed if the potential benefits of ICTs, and particularly the successful implementation of single window processes, are to be achieved.

- Africa lags behind other world regions in the deployment of ICT infrastructure, particularly broadband. More investment is needed in regional backbones, and in the reliability of communications networks, to enable all trade posts to be integrated in single windows and ensure continuity of data transmission. Power infrastructure also needs to be addressed.

- Regional integration and single windows require standardization of non-tariff regulations and documentation along trade routes. This includes adoption of standardized digital formats for data entry, interoperable systems for data interchange (based on globally agreed standards such as EDIFACT), and reliable processes for the authentication of documents and signatures. The quality of data input also needs to be improved. Legislation enabling electronic commerce still needs to be enacted in some countries.

- The shortage of ICT skills in developing and managing distributed data networks is acute. Complex systems such as PCS and national single windows require specialist ICT skills that are often unavailable. Both governments and businesses need to invest in capacity-building in order to secure the benefits of ICT-enabled trade.

- Business and administrative systems also need to be redesigned to take advantage of ICT-enabled trade – transiting, for example, from paper-based to paperless record-keeping and from full to intelligence-led inspection regimes. Cohesive decision-making, appropriate fee structures and integration along the supply chain are critical. The efficiency and coordination gains achievable through ICTs in contexts like customs administration can only be unlocked if underlying bureaucratic systems are also simplified.

- A high level of commitment is required, at national and regional levels, on the part of both governments and trading businesses. Political leaders must be prepared to address the sovereignty challenges and partnership requirements of regional integration. Users must have confidence in the integrity and value of the systems that are being introduced. Issues of corruption need to be addressed. A high degree of cooperation, including public-private partnership in the management of systems, has proved beneficial in other world regions.

- Major ICT systems such as PCS and single windows require significant finance. While the benefits of automation can be considerable, some governments are reluctant to spend resources on costly ICT solutions and associated capacity-building, particularly in those regions where regional integration has so far been limited. There is an important role here for International Financial Institutions and other development partners.

The impact of ICT-enabled trade facilitation, and single windows in particular, can be substantial, but it is unlikely to be achieved overnight. Major system changes such as those required take considerable time to implement and to gain the confidence of users. Long-term gains are likely to be more important than short-term gains. Systems need to remain viable over a significant period during which other ICT deployment may change rapidly – in particular, the adoption of new mobile and internet applications by trading businesses, and changes in the balance between formal and informal trade.

Underpinning these developments are changes that have taken place in African communications. The rapid growth towards ubiquity of mobile networks has increased cross-border communications, though it is not yet clear what impact this has had on the movement of goods and people. Liberalization of communications markets and the deployment of new international submarine cables around the African coast have facilitated Africa's global connectivity and encouraged investment in inland broadband infrastructure. The advent of mobile transactions and of low-cost mobile roaming has had an impact on transactions and cross-border business interaction in some regions.

ICTs for
**REGIONAL TRADE AND INTEGRATION**
in Africa

# 4

# REGIONAL & NATIONAL EXPERIENCES

Extending ICT-enabled trade from national implementation to regional integration is critical to leveraging developmental gains. There has been significant variation in the development of regional integration in Africa, with consequential impacts on ICT-enabled trade. Developments in East, West and Southern African regions have been more encouraging than those elsewhere, including a Tripartite Agreement which establishes a free trade zone among the 26 countries of COMESA, EAC and SADC. Progress has been made towards greater integration, the establishment of customs unions and, especially in the EAC, towards a common market. In East and Southern Africa these efforts have been boosted by the launch of public-private-donor "Trade Mark" partnerships, which include ICT-enabled initiatives for trade facilitation.

The report identifies examples of progress that has been made in these regions towards ICT-enabled trade. These include initiatives to support the transit of goods along trade corridors in four REC regions (COMESA, EAC, ECOWAS and SADC), experiments with one-stop border posts, integration of customs administrations in landlocked countries with continental entry points in other states, the establishment of regional business information portals and payment systems, and steps towards the establishment of regional single windows.

The weakness of the four remaining RECs – AMU, CEN-SAD, ECCAS and IGAD – is, however, a major challenge. With the exception of the CEMAC subregion in ECCAS, where cross-border trade is limited, these have been unable to move towards effective free trade zones. Political borders and relationships are problematic in some cases, making progress towards regional economic cooperation and data-sharing hard to manage. These RECs are also seriously under-resourced. Progress is, therefore, to a significant degree, dependent on the resolution of regional conflicts and the development of effective intergovernmental cooperation outside ICTs and trade.

Kenya and Senegal illustrate both the potential and the challenges of ICT-enabled trade facilitation. Both are significant trading nations, which provide continental ports of entry/exit for landlocked neighbours. In both countries, customs automation has been critical to ICT-enabled trade. Senegal was one of the first African countries to automate customs, building its own GAINDE system rather than adopting the generic ASYCUDA system which is in wider use in Africa. Kenya also uses a variant of GAINDE known as SIMBA. In Kenya, a three year process of integration between SIMBA and the KWATOS PCS at Mombasa has been completed, but there is as yet no comparable integration between GAINDE and the port management system at Dakar in Senegal. Both countries have sought to adopt intelligence-led risk-management for goods in transit through their territory to neighbouring countries, in an effort to reduce evasion

of customs payments. Business information services have been developed in both countries, though Senegalese businesses benefit more than their Kenyan counterparts from information about potential market opportunities in their region.

The integration of customs administration with PCS and other CIQS systems is complex and challenging. Senegal has made more progress in developing a national single window, ORBUS, which has reduced clearance times and reduced transaction costs for trade consignments. Additional facilities are being integrated with ORBUS, including online payments, with the overall objective of achieving a paperless trade environment. The Government of Kenya has established a company, Kentrade, to develop a national single window building on the experience of integration between SIMBA and KWATOS.

Both countries' single window deployments are lengthy processes, owing to the complexities involved in securing coordination between government agencies, partnership between government and business, and the necessary system upgrades and redesign. The most important challenges to ICT-enabled trade illustrated by experience in Kenya and Senegal are not technical but infrastructural and institutional, including skill and resource limitations. New legislation and regulations are required, especially in areas like eCommerce. Vested interests are often reluctant to support transition to new systems. Power shortages and teething problems can undermine user confidence. These challenges are serious and substantial, and ICT implementations that ignore them are unlikely to succeed. Nevertheless, the experience of these two countries illustrates the potential for ICT-enabled trade facilitation and for achieving progress towards integrated single windows at national level. In particular, it illustrates how the introduction of ICT-enabled systems at particular points along the supply chain, such as PCS and customs management, acts both as a precursor to and a prerequisite for the implementation of a national single window.

ICTs for
**REGIONAL TRADE AND INTEGRATION**
in Africa

# 5 RECOMMENDATIONS

The objectives of ICT-enabled trade facilitation are to:

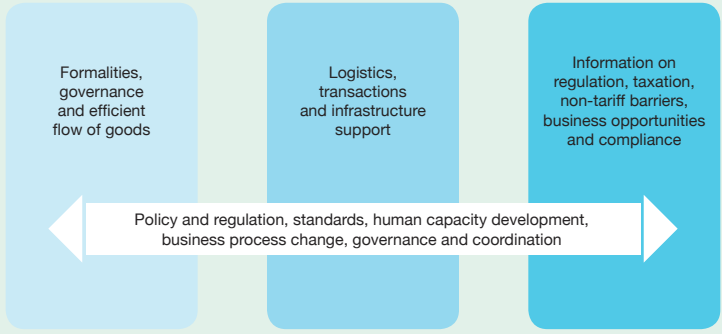
- improve the efficiency with which individual trade processes are undertaken;
- improve coordination between different actors along the supply chain; and
- improve access by trading parties to necessary information on trade management and market opportunities.

Together with administrative reform and simplification of trade management, ICT-enabled trade facilitation should help to reduce costs and delays experienced by trading businesses and to improve the reliability of trade.

The value of ICTs in trade facilitation can only be effectively realized if it is integrated with broader cross-cutting activities by governments and development partners, as illustrated in Figure 5.

Figure 5

**ICTs and trade – the supporting environment**




These cross-cutting areas of activity include:

- the development of trade and industrial policies aimed at economic diversification, including manufacturing and services as well as primary commodity production;
- investment in power and transport infrastructure;
- the establishment of an enabling environment for communications sector investment and an enabling legal and regulatory environment for eCommerce;

- greater attention to regional integration and economic partnership by governments; and

- the adoption of common standards for data interchange and non-tariff requirements.

Within this context, governments, RECs and development partners should work with other stakeholders progressively to build ICT-enabled trade facilitation in Africa by:

1. assessing the needs of actors in the supply chain, strengthening the capacity of government institutions and trading businesses to use ICT-enabled systems;

2. deploying ICT-enabled applications at critical points along the supply chain such as customs, ports and border crossings;

3. adopting single window principles and gradually developing national single window systems for data management and sharing; and

4. extending single window principles and practice to regional levels.

The adoption of single window principles lies at the heart of the core programme of ICT-enabled trade facilitation recommended in the report, with the implementation of single window processes derived from these principles evolving from individual locations through national to regional trade environments.

## Governments

Governments are particularly concerned with revenue collection, compliance and trade promotion leading to economic growth. The starting point for government engagement with ICTs and trade should be a national policy framework based on a critical assessment of trade barriers and opportunities, through which the most effective points of implementation for ICTs can be identified. Governments should also invest in infrastructure improvements, without which ICT-enabled trade facilitation will have limited impact.

Within this context, governments should prioritize the following ICT-enabled interventions, building sequentially from points 1 to 7:

1. Adoption of international standards for non-tariff barriers and for trade documentation, and harmonization of both across land borders.

2. Adoption of single window principles and development of a strategy for gradual implementation of these based around needs

assessment and stakeholder participation.

3. Upgrading of integrated customs management and development of joint government/business-led Port and Cargo Community Systems at ports and airports.

4. Introduction and development of intelligence-led inspections with high levels of data integrity.

5. Integration of compatible border management systems aimed at minimizing clearance time at border crossings.

6. Procurement and implementation of a national single window process which is consistent with automated customs management, and which will integrate ICT-enabled applications at particular locations and in particular communities within a coherent system which has the active engagement of both government agencies and trading businesses (and which may be jointly managed by them through a public-private partnership).

7. Experimentation with bilateral one-stop border posts with neighbouring countries where harmonization of non-tariff structures has been achieved.

In addition, from an early point in the sequence just described, they should address issues of transaction and information access:

8. Enactment of legislation and implementation of regulations and procedures that enable e-commerce and electronic transactions.

9. Implementation of portals that provide information concerning national trade processes, including rules, regulations and procedures, and information concerning business opportunities.

Implementation needs to be undertaken gradually, in prioritized and manageable stages which can be properly resourced, with the consent and engagement of all stakeholders, particularly trading businesses. Retraining and capacity-building will be critical, and progress should be monitored and evaluated.

## Regional Economic Communities

Regional Economic Communities have an important role to play in enabling regional integration of ICTs and trade. In the case of the weaker RECs – AMU, CEN-SAD, ECCAS and IGAD – the priority should be to establish better coordination and begin to make progress towards free trade zones and customs unions.

Where the stronger RECs – COMESA, EAC, ECOWAS and SADC – are concerned, they should build on existing experience and agreements by:

- adopting a regional vision for trade facilitation, based on the single window concept;
- focusing attention on the infrastructure challenges that inhibit trade, including transport and communications networks;
- developing guidelines to foster national and bilateral trade facilitation that will have regional value, for example on trade corridors;
- supporting the harmonization of national approaches to trade management across the region, including common non-tariff requirements (such as rules of origin and plant hygiene standards) and common data and documentation standards;
- implementing portals and other business information resources; and
- monitoring and evaluating the development of regional trade, including trade in services and informal trade as well as formal trade in goods.

## International financial institutions and other development partners

International financial institutions and other development partners should support these national and regional initiatives in three main ways:

- by investing in the enabling environment for trade, including power, transport and communications infrastructure;
- by providing financial support for the implementation of national and regional ICT-enabled trade facilitation programmes along the lines described above; and
- by providing policy and capacity-building support in areas including the assessment of national policies, regional harmonization and standardization, and the monitoring and evaluation of trade performance.

They should also provide institutional and financial support to develop the capacity of Africa's RECs.

# Further reading

**AFRICAN DEVELOPMENT BANK**
***ADB Group Regional Integration Strategy, 2009-2012***
http://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/BANK%20GROUP%20REGIONAL%20INTEGRATION%20STRATEGY%202009%20-2012.pdf

**BRENTON, P. and ISIK, G., eds**
**(2012)** ***De-Fragmenting Africa: Deepening Regional Trade Integration in Goods and Services***
World Bank
http://siteresources.worldbank.org/INTAFRICA/Resources/Defrag_Afr_English_web_version.pdf

**McLINDEN, G., FANTA, E., WIDDOWSON, D. and DOYLE, T., eds**
**(2011)** ***Border Management Modernization***
World Bank
http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2011/01/07/000356161_20110107013015/Rendered/PDF/588450PUB0Bord101public10BOX353816B.pdf

**NEPAD**
**"Regional integration and infrastructure"**
NEPAD Planning and Coordinating Agency
http://www.nepad.org/regionalintegrationandinfrastructure

**UNDP**
**(2011)** ***Regional Integration and Human Development: a Pathway for Africa***
http://www.undp.org/content/dam/undp/library/Poverty%20Reduction/Trade,%20Intellectual%20Property%20and%20Migration/RIR%20English-web.pdf

**UNECA**
**(2010)** ***Assessing Regional Integration in Africa IV: Enhancing Intra-African Trade***
http://www.uneca.org/aria4/

**WORLD BANK**
**(2011)** ***Harnessing Regional Integration for Trade and Growth in Southern Africa***
http://siteresources.worldbank.org/INTRANETTRADE/Resources/239054-1239120299171/5998577-1254498644362/6461208-1300202947570/SA_Regional_Integration.pdf

**www.eTransformAfrica.org**

Publications for eTransform Africa include the Summary Report, Main Report which includes an overview chapter and summary chapters of the full reports, and the full reports themselves covering the following sectors and cross-cutting themes:

Sectors themes:

- Agriculture
- Climate Change Adaptation
- Education
- Financial Services
- Modernizing Government
- Health

Cross-cutting themes:

- Regional Trade and Integration
- ICT Competitiveness

For a more detailed presentation on the role of ICT in regional trade and integration in Africa, see the full eTransform Africa sector report: http://www.etransformafrica.org.

Graphic design by Marie-Anne Chambonnier

**eTransform AFRICA**