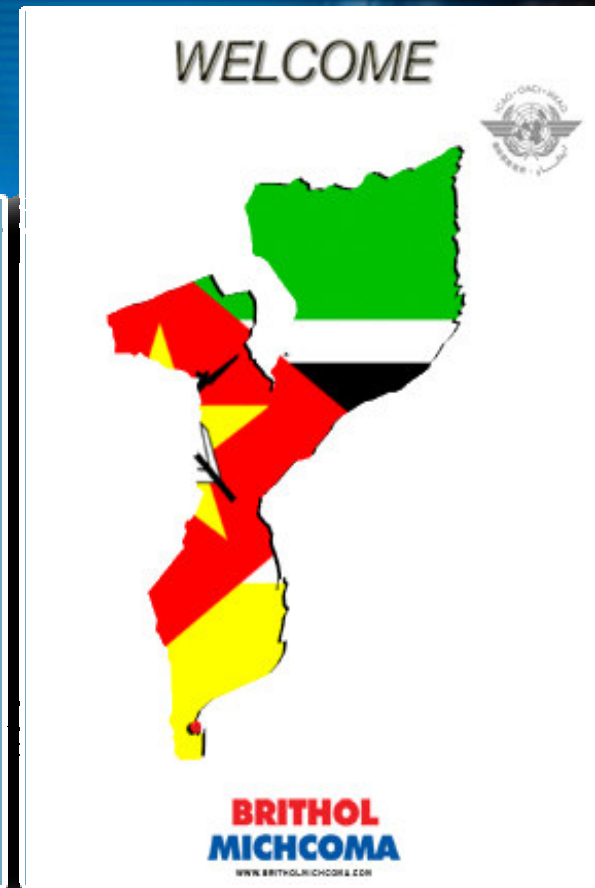# > A WARM WELCOME...

- ◦ **A warm welcome to Mozambique**

- ◦ **We thanks ICAO for organizing such an important meeting here in Mozambique and the chance to discuss our ideas and present our solutions**

WELCOME

**BRITHOL MICHCOMA**
WWW.BRITHOLMICHCOMA.COM

# > WHO IS BRITHOL

o **Brithol Michcoma is a set of African companies with their head quarters in The Netherlands and a focus in the African market**

o **It's focus is on Security Printing and Software Integrated Solutions for Government Institutions and the Banking industry in the African continent**

## > The presentation...

◦ *"Those who spend their time living and working along our borders enjoy ringside seats to one of the most vexing and important policy contests of our time - how to strike the right balance between control and openness."*

**Anonymous**

> Borders in our changing world are increasingly meeting grounds for markets and cultures.
> while historically their aimhas been to separate, today they often have to accommodate.

# > OUR FOCUS...

- Our focus in this presentation is on

  - Summarising the facts and factors regarding Terrestrial Border Control in Africa.

  - Our solution for immigration authorities in tackling the challenges of controlling terrestrial borders.

angola
cape verde
england
germany
mozambique
netherland
portugal
south africa
tanzania
vietnam

# > THE FACTS AND THE FACTORS...

- ◦ Criminal activities such as frontier-running, illegal immigration and fraud, cost far more than state-of-the-art Immigration Border Control Systems;

- ◦ Stagnation means decline: The battle against illegal immigration and frontier-running is ongoing and we should never stop improving our documents and systems;



CAVIS

NO BORDER CONTROL
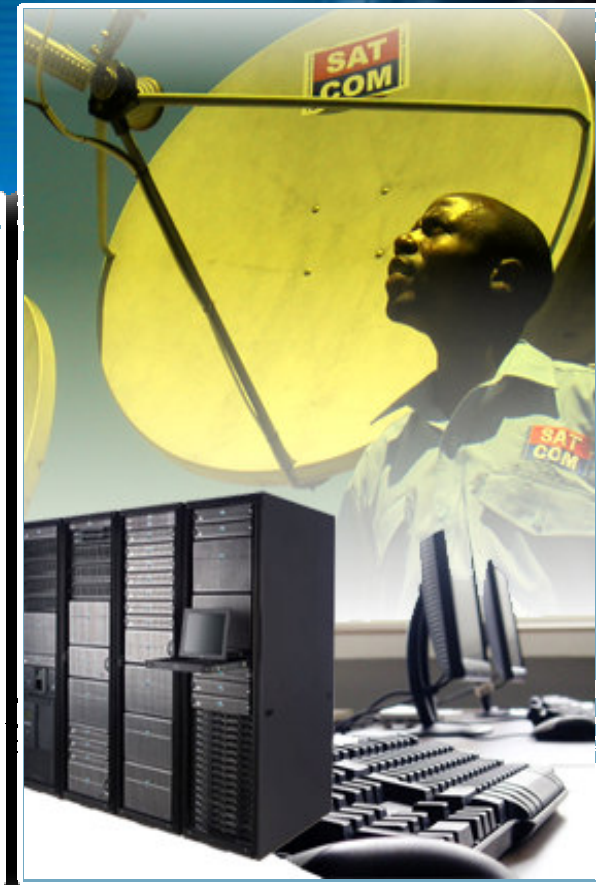
# > THE FACTS AND THE FACTORS...

- Developing Border control immigration system with a traveller's database and a watch list is a very difficult and complicated process. The management and effectiveness of the watch/stop list form a fundamental part of every nation's security effort;

- States, especially in our development countries have an important stake in getting border control right. Eroding border control has sobering implications for a wide range of security, crime and economic development interests. Terrestrial borders must be supportive of the need to move goods and people;

- The long and wild terrestrial border in our developing countries and the geographic and demographic challenges are well known to all of us.



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# > THE FACTS AND THE FACTORS...

- As every country is different, certain elements need to be considered before starting the process of choosing a border control system:
  - Historical, geographical and political factors
  - General and IT infrastructure
  - Response time and the balance between security and the level of satisfaction required
  - Costs

- What works for one country, doesn't necessary work for another. Not only each country should be looked at as a separate challenge-solution but even each individual border of the same country.
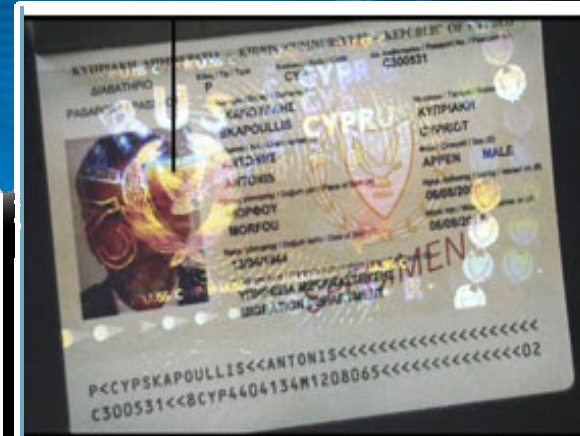
# > THE FACTS AND THE FACTORS...



- Secure and efficient immigration clearance and travel management processes are heavily reliant on the security of travel documents.

- Low quality travel documents invites high quality forgeries. The perfect combination would consist of security features that can be inspected with the naked eye, features inspected using uncomplicated tool (UV lamp, magnifying device, etc...) and passports fitted with smart chip. (RFID passport).

- Inspection process at the border still depends largely on the physical security features, despite the growing numbers of e-passports.

# > THE FACTS AND THE FACTORS...

- ◦ **Identity theft:** We have placed high emphasis on document fraud, at times we lost sight on Identity fraud. It is important that the identity of the applicant is established beyond any doubt (Irrefutable identification)

- ◦ **Internal Fraud,** while unpleasent to talk about, ignoring the possibilities is dangerous. A robust internal control system provides a fair and transparent management system.

- ◦ **Real immigration control** is not just about managing those who get in, but also manage the stay permit of those who entered legally, controlling their duration of stay and when they leave.
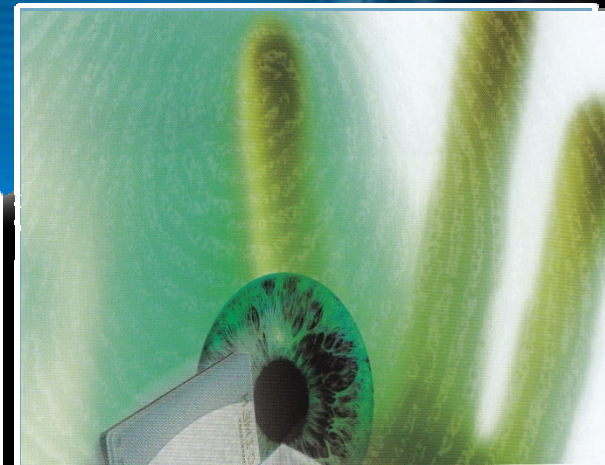
## > CAVIS ®:
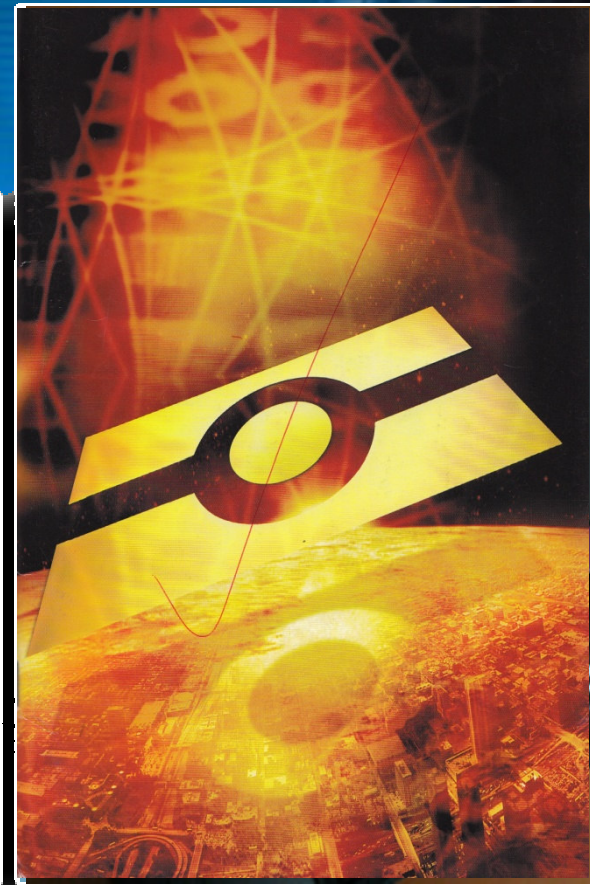## Central Advanced Visa & Immigration System

- The balance between usability and security is vital in any border control system. Border control authorities are under pressure to always improve security and safety in a cost-effective and timely manner, but at the same time minimise any public inconvenience.

- Immigration border Control System need to be chosen and configured well, because if the measures are too onerous, they create long queues and lengthy delays which create substantial incentives for corruption which inevitably leads to less security.

- While our borders do not have yet the infrastructure to adopt a typical ABC (Automated Border Control) system, It should not put us off trying to establish a system with as much automation as possible which can work in our environment and conditions
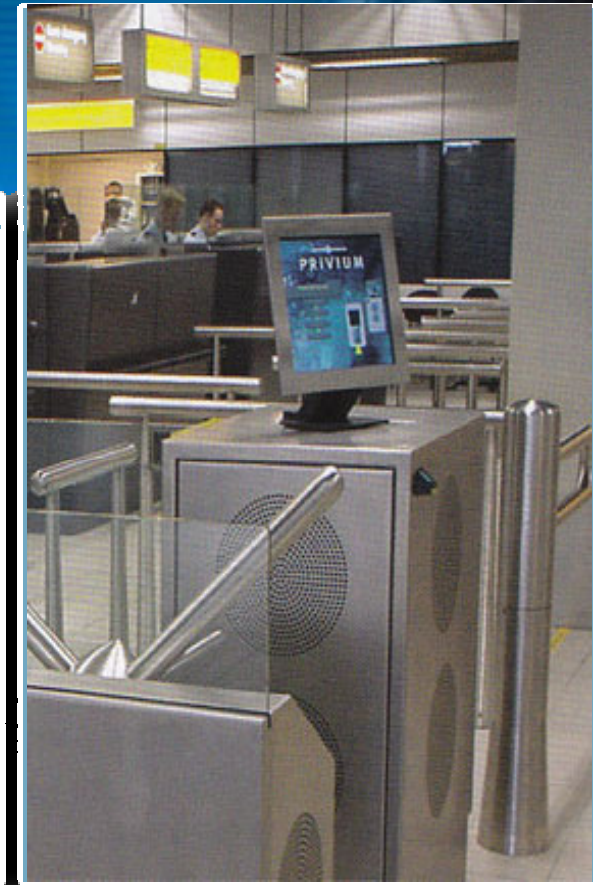
# > CAVIS ®:

## Central Advanced Visa & Immigration System

- The introduction of the e-passport not only improve the efficiency of the inspection process, it also provided greater security. However there are still millions of valid travel documents that are either wihout the RFID chip or even without MRZ, and a border control system should be able to manage and securely check and introduce these type of passports just as well as the e-passport.

- While CAVIS has taken full advantages of the machine readability of the e-passport (chip reading, face recognition, etc...), it has also incorporated techniques that can deal with all type of travel documents apart from passports, including emergency certificates, travel ID cards, non RFID passports and non machine readable passport.

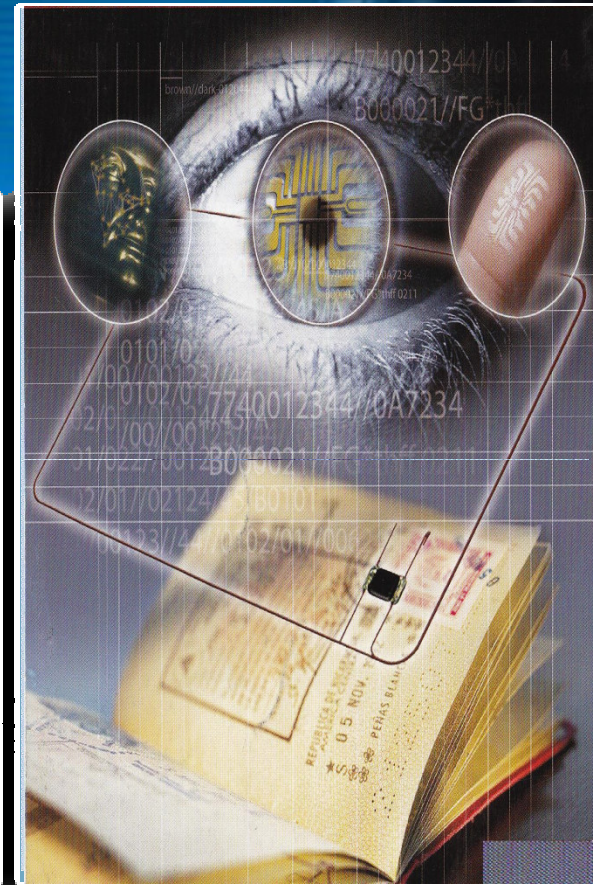# > CAVIS ®:

## Central Advanced Visa & Immigration System

- ◦ CAVIS application software architecture is rules-based, which can assist in the automation and standarisation of the decision-making at the border, converting the law (adjudication and entitlement) into software models and business rules.

- ◦ CAVIS application and travellers' database:
  - – Uses fuzzy logic based on various criteria to quickly and accurately match individuals to their identities.
  - – is scalable to accomodate the huge data volume during the identity search
  - – Uses a combination of Biographic and biometric data (when possible),
  - – handles information gaps,
  - – is adabtable and flexible to accomodate new technologies and techniques when they become available.

# > CAVIS ®:
## Central Advanced Visa & Immigration System

- ◦ No Biometric System can determine someone's ultimate identity, but to recognise the person as previously known and are only as valid as the documents presented at the time of enrollment. However it is a vital tool to enforce the "One record, one document, one person" policy.

- ◦ CAVIS fully supports Biometric verification and identification for Fingerprints, Face recognition and IRIS.

- ◦ During the verification step CAVIS links the document with its owner through biometric data available in the document itself in the case of e-passport as well as with the central database (previous visitors or check list), using the technique of fusion of both Biographic and Biometric data to improve the quality of the match and establishing a balanced and the desired False Accept Rates (FAR) and False Reject Rates (FRR)

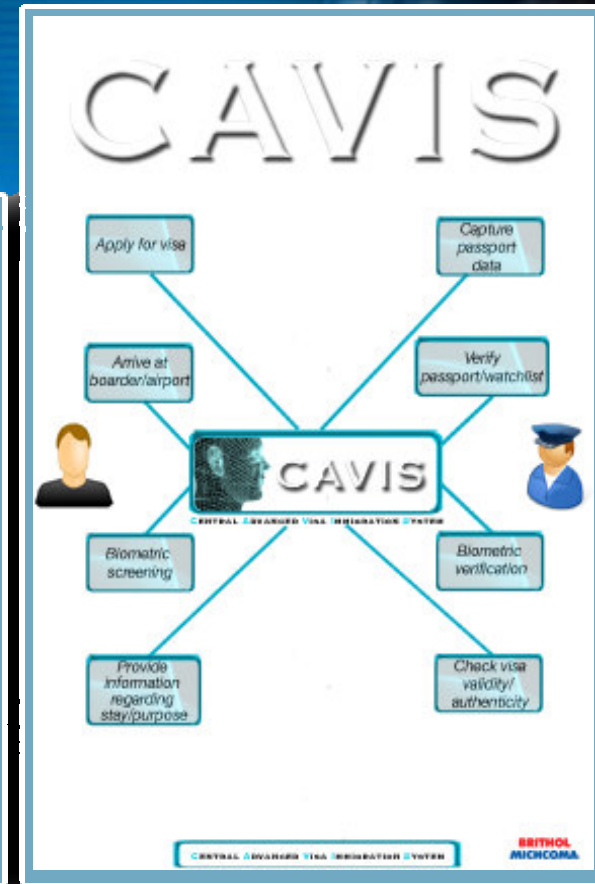# > CAVIS ®:
## Central Advanced Visa & Immigration System

◦ CAVIS adopts a higher false accept rate (FAR) when searching its watchlist to ensure a positive match is more likely even if it meant a more false hits, and the opposite (higher threshold) when searching normal travellers' records.

◦ For a more cost effective solution, CAVIS can provide choices for countries and borders on the type of biometric used (IRIS, Fingerprint, Face), Verification Vs Identification or any other hybrid scenario that can be scaled down or up depending on the current scenario or the one that can rise in the future.

◦ Improved connectivity between INTERPOL's databases and CAVIS border control system, with integrated realtime access to both MIND and FIND data access.



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## > CAVIS ®:
## Central Advanced Visa & Immigration System

◦ **The CAVIS solution's steps summery:**

– Machine reading of the document data and automated comparison with stop-list, stolen document and INTERPOL FIND

– Machine authentication of the document security features and in the case of e-passport read the chip data and display biographic data

– Multiple biometric search (Identification / Verification) by technical comparison with biometric search file to confirm the identity and verify the link between the document and its holder.

– Visa inspection (when applicable) and the authentication of the issuing process (comparison with Visa data captured at the consulates (biographic and biometric) and those of the passport)



CAVIS
CENTRAL ADVANCED VISA IMMIGRATION SYSTEM

Apply for visa
Capture passport data
Arrive at boarder/airport
Verify passport/watchlist
Biometric screening
Biometric verification
Provide information regarding stay/purpose
Check visa validity/ authenticity

CENTRAL ADVANCED VISA IMMIGRATION SYSTEM

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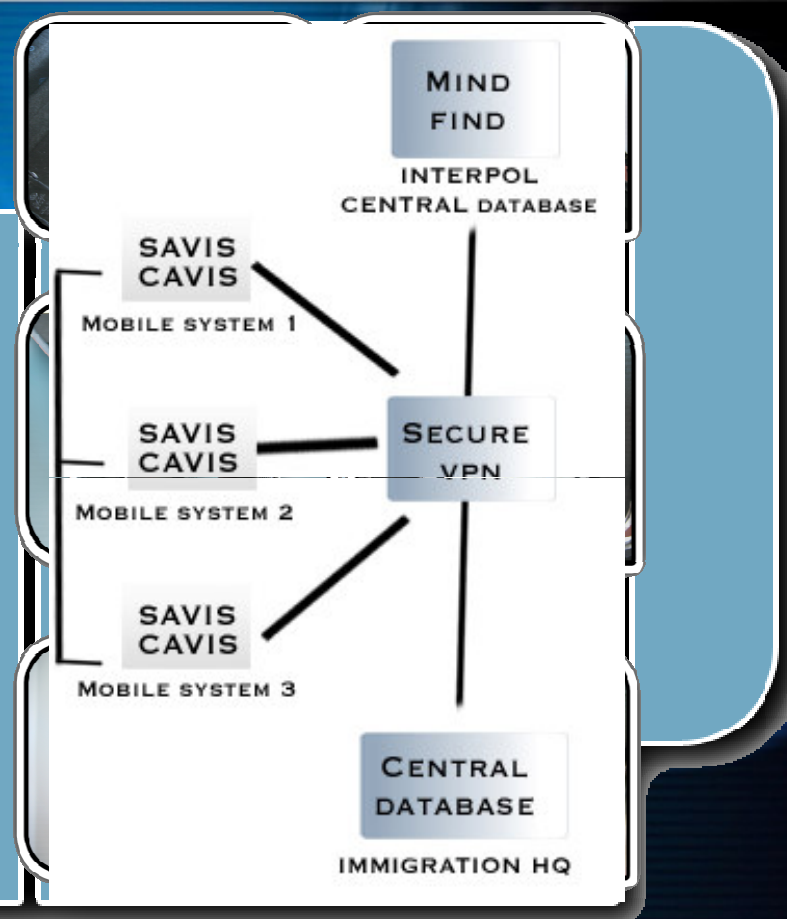## > CAVIS ®:
## Central Advanced Visa & Immigration System

- ◦ While the Visa is not an automatic right of admission, it is still defined as the document that allow a person to apply for admission to a given country.

- ◦ Complementing our Visa issuing system SAVIS (Secure Advanced Visa Issuing System) CAVIS will read, detect and verify ICAO compliant visa labels.

- ◦ As part of it's visa control, CAVIS can be configured with:
    - – Direct link with the issuing consulate
    - – A pre-defined Visa type definitions
    - – Validity period and stay permit control
    - – Multiple and frequency visit monitoring
    - – Basestock and visa label control (stolen Visa, damaged Visa, etc...)



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# > CAVIS ®:

## Central Advanced Visa & Immigration System

- The SAVIS and CAVIS mobile system is a complete entity and has all elements for full immigration border control in a restricted area.

  - If needed it can operate independently and can be self supporting for a longer period of time.

  - It's powered by a solar panel as well as rechargeable batteries that can last for 8 hours.

  - Direct connection with central database, inter-mobile connections and with INTERPOL platforms (MIND & FIND) using GPRS communications.

  - Elegant, light and tough and can be scaled and customized tailor made to the customer requirement

  - Visa issuing on the go (in less than a minute), with a complete ICAO compliant visa label printout and full biometric (10 fingers) capture



MIND FIND
INTERPOL CENTRAL DATABASE

SAVIS CAVIS
MOBILE SYSTEM 1

SAVIS CAVIS
MOBILE SYSTEM 2

SAVIS CAVIS
MOBILE SYSTEM 3

SECURE VPN

CENTRAL DATABASE
IMMIGRATION HQ

# > CAVIS ®:
## Central Advanced Visa & Immigration System

- CAVIS stretch Border control beyond the check of travel document and biometric data. It adds for example:
  - Vehicle Control, by using automatic Number Plate and capture the number of passenger in the car. This helps in controlling human traffic and human smuggling.
  - CCTV used as face recognition to identify potential threats before they arrive at the immigration post (at the point of entry at the border)
  - Integrated CAVIS system (linked to Hotels through a secure web application) will alert authorities to any individual who exceeded their authorised stay.

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portugal
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# > THE HUMAN ELEMENT...

◦ *It is not just about the system or the machines, but still very much about the human factor. Because at the end, it is the person behind the desk that is ultimately controlling the border. We need to consider:*

  – *When adopting a system or a procedure, it has to be done with care and sufficient deliberation and consultation.*

  – *Human system – Zero tolerance*

  – *Work atmosphere, environment*

  – *In-house auditing, staff rotation, staff screening*

  – *Increase the efficient use of technical equipments.*

  – *Staff motivation, training and creating a personnel development benchmark.*

> CASE STUDY: ANGOLA VISA

SAVIS SYSTEM OF ANGOLA

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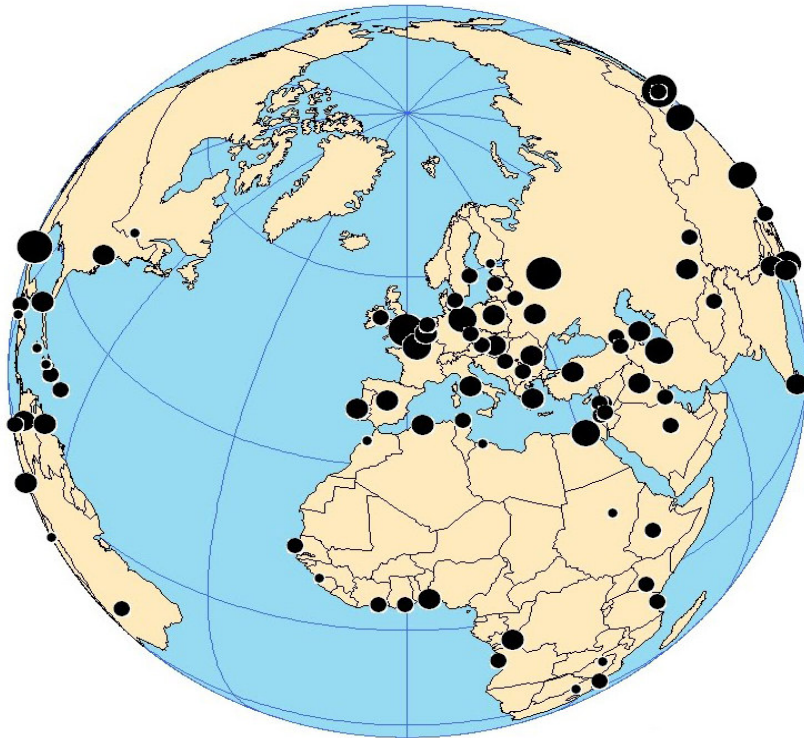
# > THE LAST WORDS...

○ *"If I find 10,000 ways something won't work, I haven't failed. I am not discouraged, because every wrong attempt discarded is often a step forward"* **Thomas Alva Edison**