

# BUILDING GOMIX IN THE COVID-19 PERIOD AND ITS INTERNET ECOSYSTEM

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**December 2021**



# ISPA-DRC

- ISPA-DRC is a non-profit association of Internet service providers
- The mission of ISPA-DRC is to contribute to the development of the Internet industry in the DRC
- ISPA-DRC brings together companies representing more than 90% of the Internet networks officially licensed to operate in the DRC
- ISPA-DRC currently has 16 members: 4 MNOs and 12 ISPs

## Sources of operating funding:

- ISPA-DRC membership fees;
- Service delivery
- Donations



# WHAT ABOUT GOMIX?

- GOMIX is the third community and neutral IXP of the RDC-IX project initiated by ISPA-DRC, launched in September 2021, after KINIX (2012) and LUBIX (2019)
- **GOMIX's geographical situation:**  
Located in the city of Goma in eastern DRC  
The networks which are connected to GOMIX serve the other towns surrounding Goma such as: Beni, Bukavu, Bunia, Butembo, Kindu,...
- **GOMIX peers:**  
8 peers :
  - 2 CDN (Google, Meta)
  - 3 MNO ( Airtel, Orange, Vodacom)
  - 3 ISP ( Gbs, Microcom, Techplus)



## THE GOMA INTERNET ECOSYSTEM BEFORE GOMIX

- Digital transport infrastructure :
  - Heavy use of Macrowave transmission
  - Limited deployment of municipal optical fiber
  - Limited deployment of Inter-city optical fiber
- Lacks hosting infrastructure for digital content and services :
  - Neutral data center
  - Neutral server room
- Very low local digital services production
- Very low digital services consumption
- Very high transit costs



# IMPACTS OF THE COVID-19 PANDEMIC IN RDC



## Negative effects :

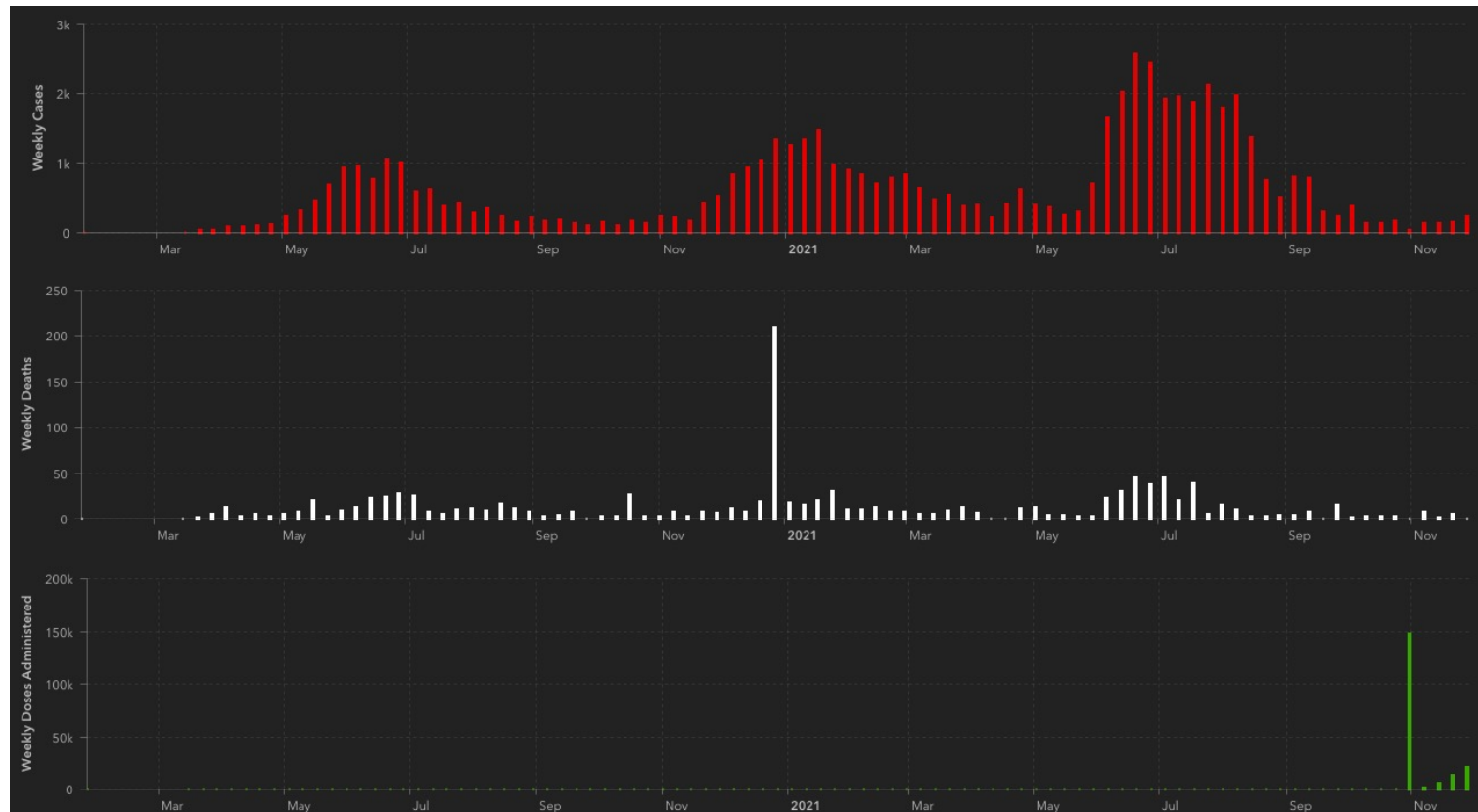
- Reduced human mobility
- Degradation of the socio-economic situation



## Positive effects :

- Growth in the use of Internet tools for remote meetings (WhatsApp, Skype, Zoom, etc.)
- Development of teleworking in the private and state sectors
- Development of tele-education
- Increase in IXP traffic :
  - ❑ KINIX : 80% increase (March 2020 until now)
  - ❑ LUBIX : 70% increase (March 2020 until now)

# COVID-19 in DRC



# REMOTE COORDINATION DURING GOMIX CONSTRUCTION

- Establishment of two teams, one for remote supervision and another for field execution

Tools used to communicate for coordination :

- Remote Meeting (Zoom, Skype, WhatsApp)
  - Pictures
  - Video
- **Covid-19 negative impact :**
    - Late start in the building of GOMIX
    - Too much time to move from one step to another
    - Lots of time to deploy a network
    - Late acquisition of equipment
  - Covid-19 positive impact :
    - Saving travel budget : more than 35%



# GOMIX'S IMPACT ON ITS INTERNET ECOSYSTEM

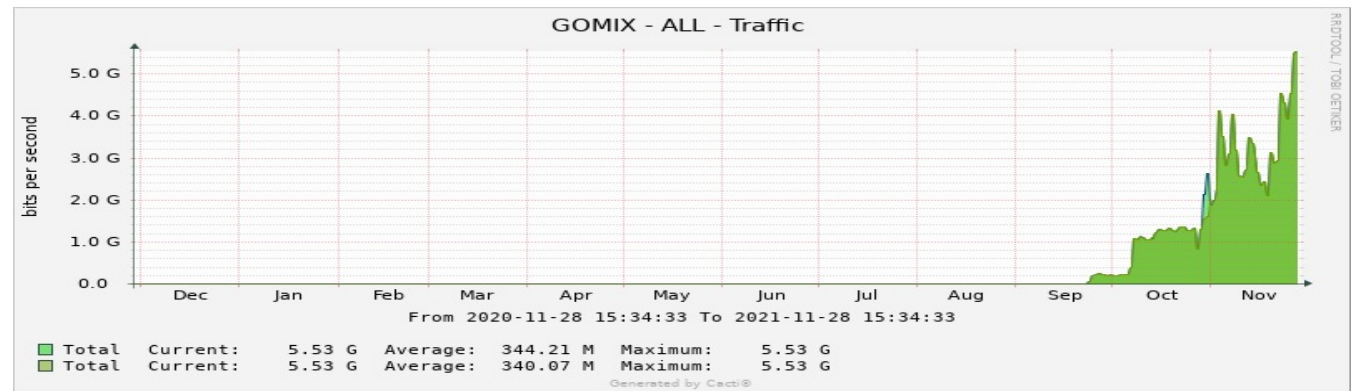
- Digital transport infrastructure :
  - Growth in the deployment and use of municipal optical fiber
  - Growth in the deployment and use of Inter-city optical fiber
- Local hosting content :
  - Local hosting of CDN servers
  - local content hosting request
  - data center construction projects initiative
- 35 ITs (Internet operator, tax administrations, regulator, developer, universities ) trained on routing in an Internet network (BGP)
- Downward trends in transit prices on the local market



# GOMIX STATISTICS

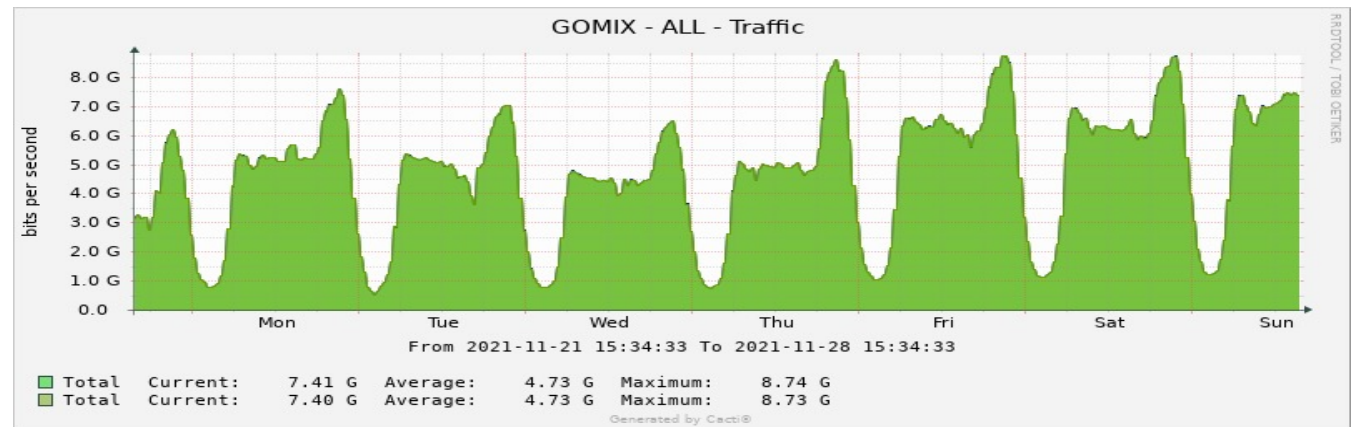
## - At launch:

- Peers: 8
- traffic peak: 3 Gbps
- Only the prefixes serving Goma city are announced by the peers



## - Three months after launch

- Peers : 8
- Traffic peak: 9 Gbps
- The traffic volume increases depending on the announcement by a peer of prefixes serving one or more city.



# CHALLENGES

- **Development of digital transport infrastructure**
  - Municipal fiber
  - City fiber
  - Cross-border fiber
  
- **Content industry development**
  - Internet resource allocation( IP address IP & ASN)
  - General public services applications
  - CDN (local et international)
  - The general services digitization
  - Content hosting infrastructure
    - Commercial and neutral server rooms
    - Commercial and neutral data center
  
- **Awareness of the Internet use**
  - E-gouvernement
  - E-Santé ,E-education ;E-culture , E-banking
  - Liberal professions services digitization

**Thank You**