Annual report
2022

Belnet
dedicated connectivity

Contents

What is Belnet?

Belnet provides its services exclusively to **309 institutions** that represent more than **860,000 end users*.**

*Does not include BNIX

Belnet is also **responsible for BNIX,** the Belgian National Internet eXchange for internet service providers, content providers, hosting companies and large private enterprises.

Belnet is the federal government organization that, since 1993, has been **responsible for the Belgian National Research and Education Network** that provides very high-speed internet access and internet services to universities, high schools, research centres and Belgian government services (more information on p.10 and p.22).

Belnet has **74 employees** and is part of the Federal Science Policy.

2022, a highly successful year

2022 has been a busy and successful year.

We were pleased to find that the work associated with the **Belnet Transformation Programme** was on schedule and that, by the end of the year, it was 90 % up and running. Within our structure, our organisational chart has also changed, and general management will henceforth encompass three departments: **Engineering & Operations, Corporate Services** and the new **Business & Community** department. Indeed, it has become increasingly important to create a link with our communities, to listen to them, to respond to their specific needs and to guarantee them the best environment and tools to enable them to realise their objectives*.

Dirk Haex
Engineering & Operations Director and General Director (a.i.) of Belnet

* We thank our customers for their continued
  support and their gracious presence,
  in picture, in this 2022 annual report.

A new, promising subdirectorate

Inspired by the commercial momentum, yet tailored to the institutional world, the new **Business & Community** directorate covers 4 communities: Research & Education, the federal government, the public sector and BNIX, each with their own strategy.

The **Research & Education** (R&E) community focuses on listening to any needs and on co-creation. For instance, every year we receive specific requests from CIOs of universities and university hospitals to meet their needs and, in turn, to enhance our service offer. With their requests, our technical points of contact at the universities provide a valuable source of inspiration.
Incidentally, we gave a presentation to the French-speaking Rectors' Council (CRef) and the Flemish Interuniversity Council (Vlaamse Interuniversitaire Raad (VLIR)) on Belnet's impact on the research sector with a view to defining its role in the context of the agenda that is common to French and Dutch-speaking universities.
The R&E community comprises, among others, 10 Federal Scientific Institutes (FSIs), that are specifically part of the Federal Science Policy. During 2022, we produced a concrete plan to put transversal tools and platforms in place to support the FSIs in the context of Open Science. It will be submitted for validation in the course of 2023.

The priority of the **Federal Government** is to find synergies, to achieve economies of scale and to streamline the generic costs of information and communication technology (ICT) relative to the needs of the community, in Brussels and throughout Belgium. Our study, carried out with the support of the federal public services and the Belgian Buildings Agency, has shown that the federal government could significantly reduce telecommunication costs by centralising governance of the entire connectivity within Belnet. Imagine 1200 buildings across Flanders, Wallonia and Brussels housing various public services, all with different contracts...
On 7 October 2022, the Council of Ministers placed its confidence in Belnet to transversally integrate the various WANs (Wide Area Networks) connecting the regional offices of the many administrations to the Internet and providing remote access to the applications implemented at their headquarters.
Lastly, on the basis of a business case produced in 2022, we launched a call for projects to replace all the optical equipment across Brussels. This work will be carried out by a single partner, the company Ciena.

Dirk Haex, who shared the daily management of Belnet with Nathalie Pinsart until December 2022, appointed Dirk Osstyn director ad interim of the new "Business & Community" subdirectorate in October 2022.

Belnet's new organisational chart was adopted in its entirety.

On the innovation side

During 2022, Belnet started taking steps in an international context, by putting services associated with three research projects in place. This research network will, in part, be used to deliver services to the GÉANT research network.

In terms of **international cooperation**, Belnet will join the dynamic GÉANT and its programme **GÉANT GN5-1** in January 2023. We will allocate resources to 4 working groups: Security, Network Development, Network Technology Automation & Management and Trust & Identity, which is also one of Belnet's 5 cornerstones. Our experts will continue to improve the **eduroam** Wi-Fi access, which will not only be a win-win for Belnet but also for the pan-European research network.

In addition, we have allocated resources to the Work Package **Security**, another priority challenge in the Belnet strategy.

Mandated to the European Open Science Cloud (EOSC) in Belgium since 2022, Belnet is involved in the **EOSC Focus** project which aims to facilitate access to research results and transform scientific results into innovations for the general public.

Belnet also responded to a European call for tenders to implement a specific infrastructure where researchers can make use cases about **quantum communication** (QCI). If awarded, construction will commence in late 2023.

At the end of 2022, **the Federal Science Policy** launched a call for candidates for a number of research projects which will be awarded during 2023.

European Space Agency

Security objective

We continue to work on cybersecurity, both strategically and as a matter of priority, in the interest of our customers and Belnet alike. We also issued a call for tenders to work on the production of a **new DDoS platform**. That contract was awarded to the company ATOS in December 2022. Our teams and the supplier expect it to be delivered in the first quarter of 2023.

On another note, we are delighted to see that many of our customers have opted for the **Secure DNS** service, which is intended for all our communities, and that they are extremely happy with it!

For customers who need secure access to the Belnet, BNIX or FedMAN portals, via their smartphones in particular, we have implemented **Multi Factor Authentication** (MFA) across our platforms.

As to **Belnet's governance**, work has gotten underway to bring us into line with the famous **ISO 27 001 standard**, the global benchmark for information security. In addition, we have hired an **Information Security Manager** for the Engineering & Operations Department who will work alongside the person with final responsibility on the risk management of information security at a strategic level. This strengthening of our resources in the field of security is a reflection of our strategic, tactical and operational objectives.

More new developments at Belnet

To meet our customers' needs, we have **adapted** quite a few services in our portfolio:

- One example is the new **eduroam** interfaces for users, on the one hand, and for service managers, on the other hand;

- The **interface of the Belnet R&E Federation** has been given a new, more attractive look, and comes with new features in line with the specific requests we received;

- User requests have been added to **guestroam**;

- We analysed the boom in our **FileSender** service, which allows the secure sharing of large files within Belnet's control area;

- And, last but not least, Belnet has upgraded the **ScienceMAN** network, i.e. the meshing of all the FSIs situated in Brussels, to enhance redundancy, and improve the quality and efficiency of our services. Service migration was completed in January 2022 and the feedback from our customers is excellent (near to 100 % availability for all bandwidth requests).

We also **created** new services such as **Secure DNS** in April 2022 and **eduVPN**, a remote access solution for universities, colleges and research centres students and researchers can use.

"The day after Ukraine was invaded, on 24 February 2022, we received the advice from our regulator (the BIPT) to report any incidents on our network on a daily basis. While cyberattacks, the protection of our infrastructure and, more specifically, volumetric DDoS attacks against our customers were already cause for concern, this war has not made things any better."

Dirk Haex

Belnet in Belgium

And now a few words on Belnet's role in the new strategic plan of the Federal Science Policy Office. To recap, during 2020, the new government decided to give new momentum to the Federal Science Policy and the Secretary of State, **Thomas Dermine**, launched a procedure to appoint a new Science Policy chairman.

The new chairman, **Arnaud Vajda**, was appointed early 2022 and, on 17 February 2022, Belnet presented him with its business model and its specificities. On that occasion, Arnaud Vajda emphasised the crucial role Belnet is playing in Science Policy.

On 20 July 2022, Thomas Dermine and Arnaud Vajda officially signed **the new strategic Federal Science Policy plan**, launched back in 2021, under the impetus of Thomas Dermine.

This ambitious plan, signed by all the FSI directors and Belnet, sets out the different key strategies for all the parties.

Belnet's objectives focus on the **federal government**; with the implementation of **FedWAN** in the various buildings across Belgium.

In general, this plan aims to provide **universities, colleges, research centres and academic hospitals** across the various Belgian regions with **specific and transversal services** for anything associated with **EOSC**, Open Science and Open Data.

On another front and, again, by way of reminder, it has been 15 years since we first entered into a collaboration with the federal government and the regions to get access to their **dark fibre** network in exchange for a discount on their Belnet invoices. As these historical contracts were due to expire at the end of 2022, we had to renegotiate these **collaboration contracts with the regions**, their universities and colleges. They were also very interested in our portfolio of services and in our national and international research network.

As the Regions were extremely happy with our services and solutions which meet their specific needs, the contract was extended for another 15 years in a positive and open atmosphere. Aside from the terms of the aforementioned exchange, the scope of the collaboration now also includes **community membership**. Eligible members will be selected by the Regions.

Royal Meteorological Institute

National Geographic Institute

Telework

One consequence of COVID and its aftermath is that the federal government is now allowing any officials who are interested to **work from home 3 days a week.** As an organisation, Belnet, whether in collaboration with its clients or in-house, is no exception.

Still in 2022, we migrated our former in-house collaboration platform to **Microsoft 365** and **Teams** to optimise hybrid work.

KU Leuven / © Rob Stevens

The trends in cloud services

COVID triggered a strong growth in cloud services and a number of institutions finally overcame their worries about data protection and decided to turn to the **Public Cloud** which they now have complete confidence in.

Furthermore, at the end of 2022, Belnet, which offers a portfolio of cloud services, began contemplating expanding this catalogue of Public Cloud services to other communities, such as the **federal government**. That project was approved in 2023.

Moreover, Belnet is in a position to offer **OCRE** (Open Clouds for Research Environments) contracts via GÉANT, which operates in Europe and issues framework contracts requiring Public Cloud Providers. These terms - the best on the market - are now available to the following of our communities: Research & Education, the federal government and the public sector.

Belnet in practice

Our mission

Belnet is the Belgian National Research and Education Network (NREN). It encourages deployment of the knowledge and information society by providing and maintaining high-quality, innovative network infrastructures and associated services to meet the specific needs of higher education, research and public sector administration in Belgium, thanks to its expertise, unique market position and economies of scale.

Our vision

Belnet provides high-bandwidth Internet access and related services to higher education institutions, research centers and administrations. Specifically, Belnet gives them access to (inter)national research networks and value-added services in terms of connectivity, trust, security and mobility.

Royal Museum of Art and History
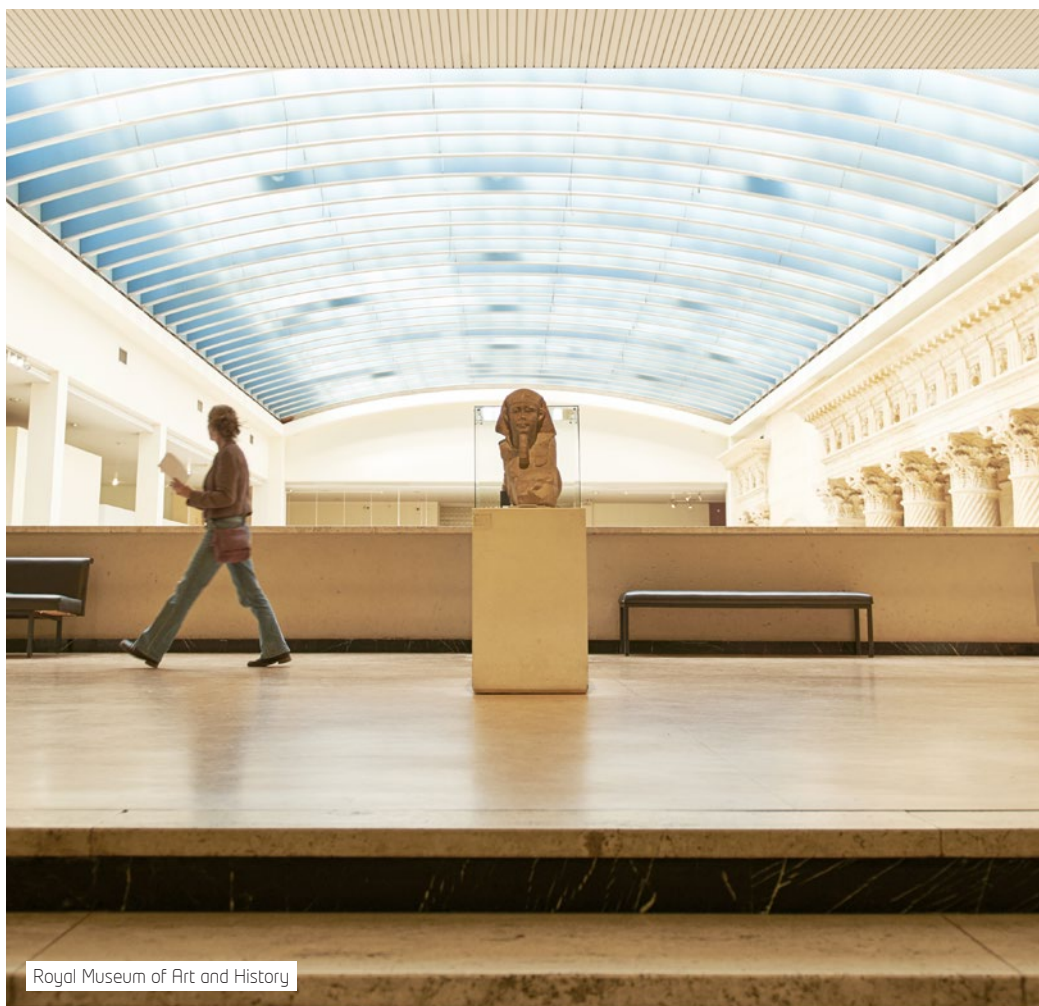
Our values

Trust
Belnet is a reliable, stable, non-commercial and neutral partner to its customers.

Professionalism
Belnet operates professionally with the required expertise and know-how..

Dedication
Belnet is dedicated to its customers and develops an infrastructure and services adapted to their needs.

Effectiveness
Belnet is an effective, dynamic, high-quality organization.

Our strategic objectives

Operational excellence
Belnet seeks to provide a quality service that its customers can trust.

Security
Information security is a priority and is an essential element of its operating method, services and activities.
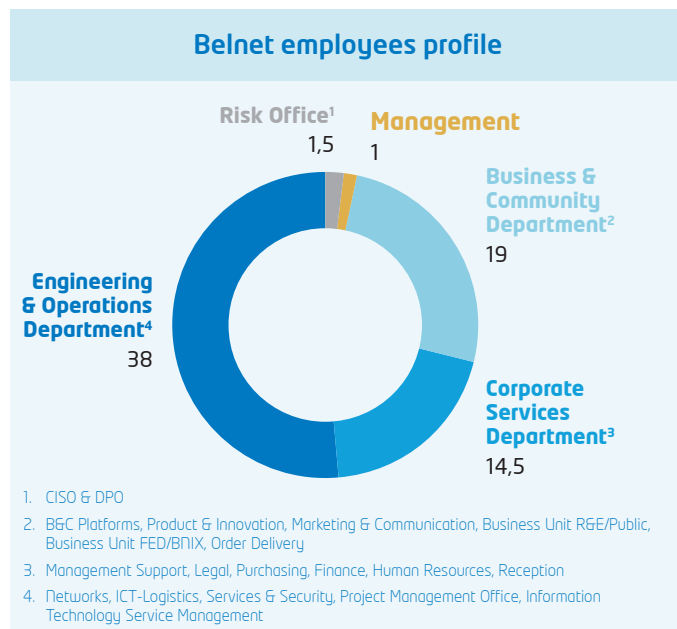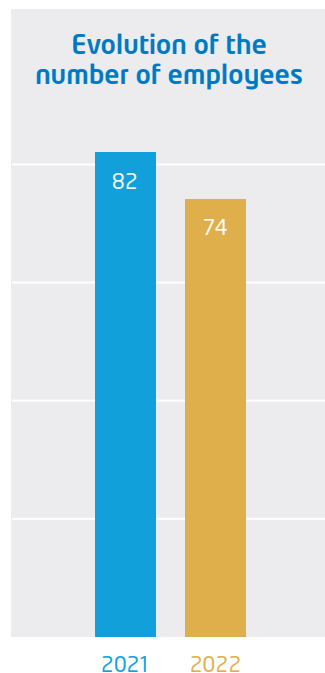
Dedicated services
Belnet provides services that meet the specific needs of its customer group.
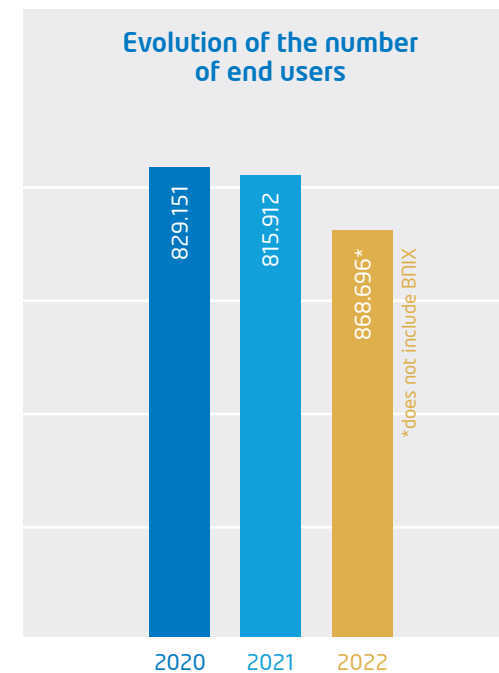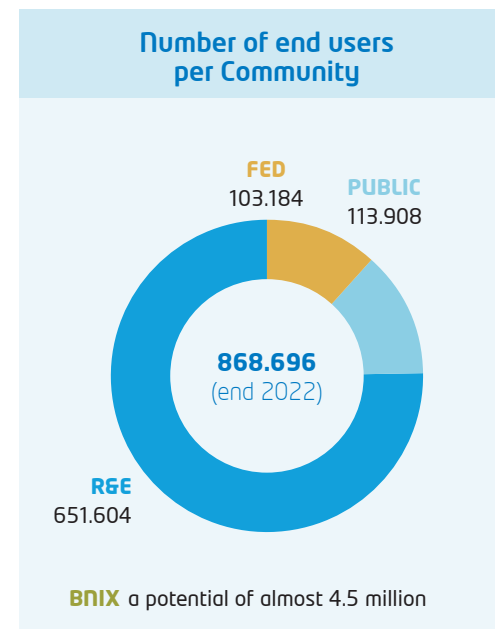
Performing organization
Belnet is a professional, performing organization that is perfectly adapted to fulfilling its mission.
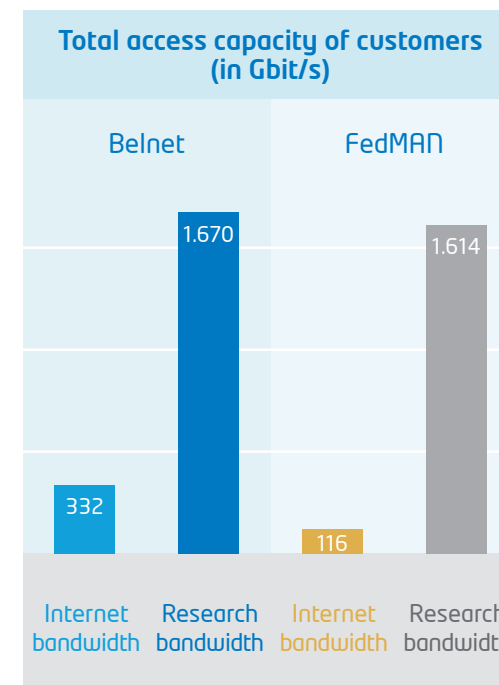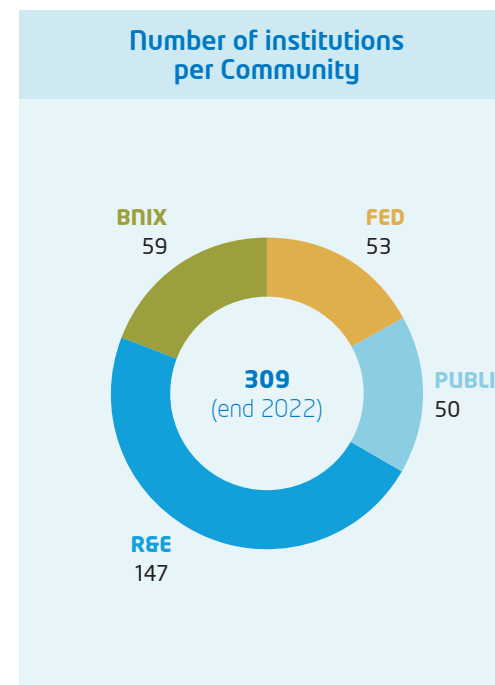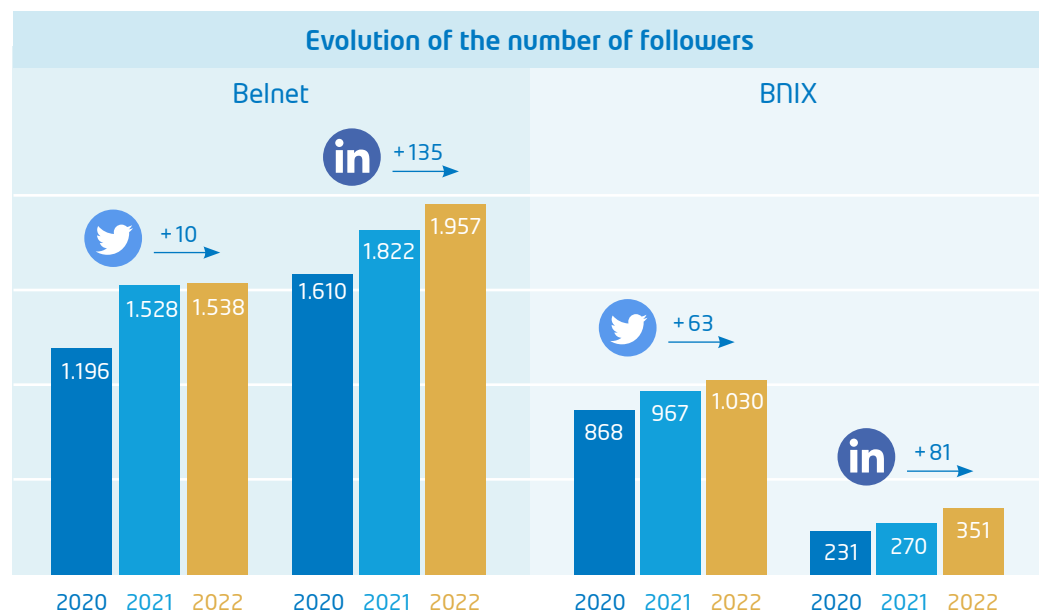
Belnet in 2022

Employees

Evolution of the number of employees

- 2021: 82
- 2022: 74

Belnet employees profile

Risk Office[1]
1,5

Management
1

Business & Community Department[2]
19

Engineering & Operations Department[4]
38

Corporate Services Department[3]
14,5

1. CISO & DPO
2. B&C Platforms, Product & Innovation, Marketing & Communication, Business Unit R&E/Public, Business Unit FED/BNIX, Order Delivery
3. Management Support, Legal, Purchasing, Finance, Human Resources, Reception
4. Networks, ICT-Logistics, Services & Security, Project Management Office, Information Technology Service Management

Social networks

Evolution of the number of followers

Belnet

- +135 (in)
- +10 (twitter)

	2020	2021	2022
twitter	1.196	1.528	1.538
in	1.610	1.822	1.957

BNIX

- +63 (twitter)
- +81 (in)

	2020	2021	2022
twitter	868	967	1.030
in	231	270	351

Belnet network

Number of end users per Community

- FED: 103.184
- PUBLIC: 113.908
- R&E: 651.604

868.696 (end 2022)

BNIX a potential of almost 4.5 million

Evolution of the number of end users

- 2020: 829.151
- 2021: 815.912
- 2022: 868.696*

*does not include BNIX

Number of institutions per Community

- BNIX: 59
- FED: 53
- PUBLIC: 50
- R&E: 147

309 (end 2022)

Total access capacity of customers (in Gbit/s)

Belnet		FedMAN	
Internet bandwidth	Research bandwidth	Internet bandwidth	Research bandwidth
332	1.670	116	1.614

Belnet network

Evolution of the external traffic (in Petabyte)


Legend: 2020, 2022, 2021 (lines across months Jan.–Dec.)
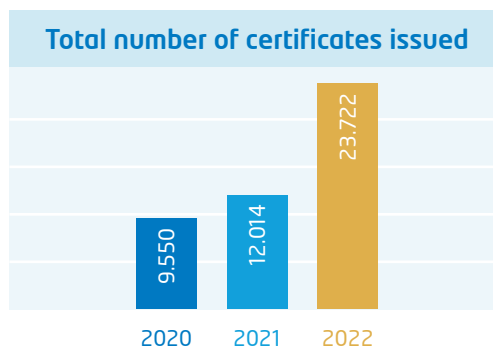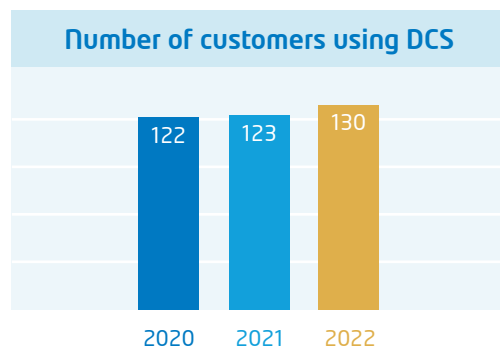
Belnet Leased Line (BLL)

The BLL service allows higher education and research organizations as well as Belgian public services organizations to easily connect to the Belnet network.

Belnet looks for the most suitable leased line to an access port on its network for these organizations and sets up a monitoring system to guarantee high-performance and permanently available connectivity.

Evolution of the number of requests

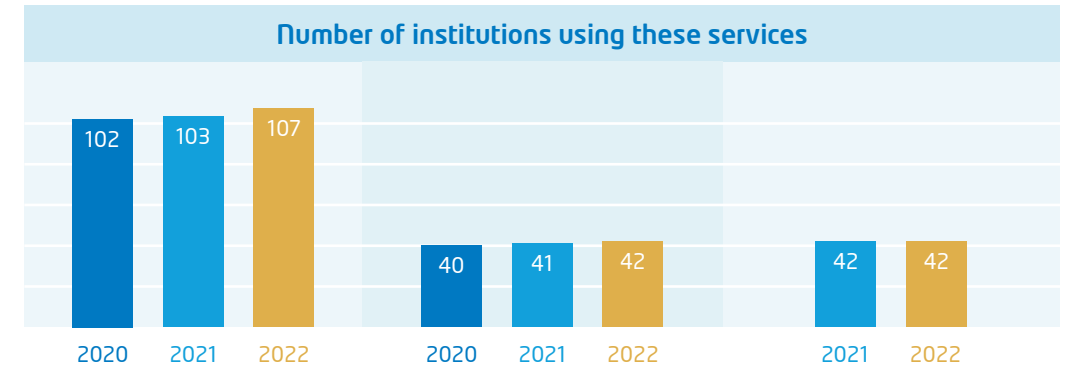| 2020	2021	2022
44	41	47
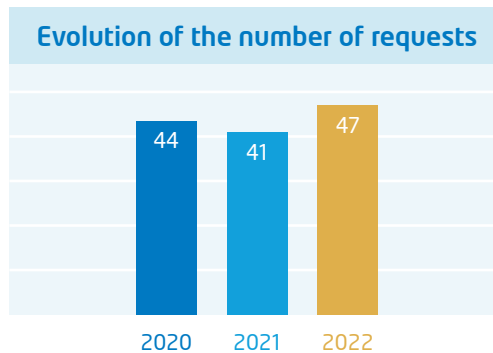
Digital Certificates Service (DCS)

Belnet's DCS offers a wide range of digital certificates that can be simply and securely managed by research or higher education institutions and Belgian public services organizations.

Number of customers using DCS

2020	2021	2022
122	123	130

Total number of certificates issued

2020	2021	2022
9.550	12.014	23.722

eduroam, govroam and Belnet guestroam

Number of institutions using these services

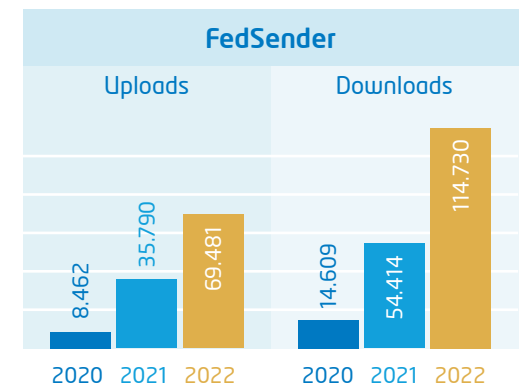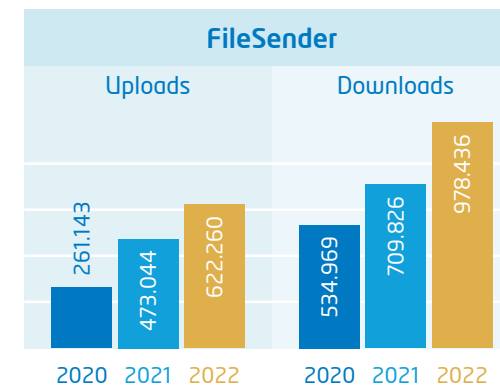|	2020	2021	2022
eduroam	102	103	107
govroam	40	41	42
Belnet guestroam		42	42

eduroam is a service that provides users at research and higher education institutions with simple, secured access to both their own organization's wireless network and also to the networks of other participating organizations across the whole world.

govroam is a service that allows civil servants to surf securely and wirelessly across all affiliated public services organizations in Belgium.

Belnet guestroam is a solution to provide visitors from higher education or research institutions with a temporary, secure and wireless Internet connection.

FileSender and FedSender

FileSender and FedSender are simple, safe applications for sending very large files.

FileSender

	2020	2021	2022
Uploads	261.143	473.044	622.260
Downloads	534.969	709.826	978.436

FedSender

	2020	2021	2022
Uploads	8.462	35.790	69.481
Downloads	14.609	54.414	114.730

FileSender can send files up to 5 TB. This service is available free of charge to employees and students of Belgian colleges, universities and research institutions affiliated to Belnet (registration and approval via the Belnet R&E Federation).

FedSender allows files of up to 1 TB to be sent and is intended exclusively for federal organisations and public services.

The BNIX platform in 2022

3
DATA CENTERS

59
PARTICIPANTS

13,2 Tbps
is the switch capacity.

INFRASTRUCTURE

14
100 Gbit/s connections

4
25 Gbit/s connections

64
10 Gbit/s connections

50
1 Gbit/s connections

In 2021, we appointed a dedicated multi-disciplinary team – customer relations, marketing, technology – headed by Stefan Gulinck. The idea was to implement a new strategy for BNIX. The team got down to work in 2021, and many changes and implementations were completed during 2022.

Note the introduction of a new **pricing** structure tailored to the market and more flexible than before. As to the other achievements, we made the **bandwidths** on the 10 and 100 Gbit/s ports far more **flexible**; we continued to invest in the **BNIX Reseller Program**, which was launched in June 2021; we designed a **newsletter** for BNIX participants and prospects. At a technical level, we have at last adjusted a number of BNIX-related services, such as the **route server** whose infrastructure was changed and is far more robust and reliable now: we introduced RPKIs as an additional security filter.

Furthermore, we launched a new service in 2022, the **Private VLAN Service**. This layer2 point-to-point connection between all BNIX participants, whether based in the same data centre or not, can be configured on a dedicated physical port or on a port used to connect to our public peering infrastructure.

A private VLAN on BNIX also allows users to offer their own IP transit service to other BNIX participants.

We entered into a collaboration with our Luxembourg colleagues: **LU-CIX** will henceforth allow participants connected via BNIX to contact participants in Luxembourg and vice versa. We introduced the **IXP Manager platform**, i.e. a multiservice portal that allows participants to manage their peering, to have an overview of all their statistics and traffic and, via **Looking Glass**, identify the other participants, exchanges, the type of the traffic, etc.

We opted for IXP Manager because of the many Internet Exchanges that use it across the world (more than 170 IXPs use the same platform).

The BNIX network

As this sector is exceptionally mobile, in particular on account of mergers and acquisitions, 2 participants have left us, 3 have joined us and some 7 have increased their bandwidth capacity at BNIX level.

At a technical level

We have been working hard on the new **BNIX platform**, which is challenging at a technical level. As we came across a number of problems mid-2022, we also had to review the design. So, we decided to take our foot off the pedal prior to production, to carry out in-depth tests and to defer delivery, scheduled for the end of 2022, to mid-2023.

Traffic: an amazing trend reversal

While we have noticed a remarkable and continuous increase in traffic, with spikes and beaten records during the lockdown days, we did notice **a decrease in traffic on the BNIX platform during 2022.**

The return to the office has meant that traffic has come down to normal levels again. When we compare the statistics of the fourth quarter of 2020 with those of 2021, we still see an increase in traffic but no more spikes.

That being said, if we compare traffic during 2022 with that of 2019, we notice a growth of more than 40 %. The spike is behind us but what will traffic look like in 2023? The future will tell.

By way of reminder, before COVID, we had spikes during the evening while, during COVID, the spikes occurred during the morning and after 12 o'clock with people's breaks at home between 12:00 and 14:00 being clearly visible. That trend seems to have disappeared: on the one hand, the telework situation is comparable to that of the COVID days, on the other hand, the spike is normal because not everyone is teleworking at the same time anymore.

More good news: soon, the **Private VLAN** service will allow us to add other services, such as **transit providers** or platforms and **VLAN services** to protect BNIX participants. In time, these additional services will become part of the BNIX portfolio.

On 4 October 2022, BNIX's candidacy for the **Mutually Agreed Norms for Routing Security** (MANRS), an initiative supported by the **Internet Society**, was approved.

The condition for candidacy as an IXP (Internet Exchange) was to implement 3 to 5 security-related actions. As a MANRS stakeholder now, BNIX has shown its ability to, securely, channel its services to its participants.

Budget outcome and accounts

Profit and loss account

Reserve fund and investment fund

The year 2022 was marked by a remarkable wave of unprecedented investment aimed at renewing critical elements of the network, both in terms of infrastructure (IRU, hardware, ...) and protection against DDoS attacks. 2,500,000 euro were financed by the fund coordinated with our subsidising authority (BELSPO-1INVEST), the second part (3,700,000 euro) being covered by Belnet's investment fund.

Income

The allocation has been adjusted (+5%) mainly to take into account the exceptional indexations suffered by the entire economic world in 2022, to enable us to cover as effectively as possible the remarkable increases in staff costs and energy bills. The total income from invoiced services decreased by 5% compared to 2021, continuing the phased transfer of FedWAN income from invoicing to allocation.

Expenditure

Inflation in 2022 has clearly weighed on the 8% increase in staff costs compared to 2021.

Operating expenses have risen significantly due to the inclusion of external support covering both the implementation of new investments (installation, configuration, new maintenance, ...) and the end of the project to modernise internal organisational structures.

The near doubling of depreciation reflects the very substantial investment efforts made. These will have to be offset by the positive results expected over the next four years (applicable depreciation period) so as to rebuild the financial reserves with a view to the next wave of network renewal.

Income statement, in euros	Financial year 2020	Financial year 2021	Financial year 2022
Expenditure			
Other use of consumer goods and third-party services	9,283,405	9,366,059	10,729,862
Property and other expenditure	26	-	-
Direct and indirect staff pay	6,425,580	6,716,487	7,269,794
Financial depreciation on set-up costs, tangible and intangible assets	1,556,202	1,425,657	2,609,100
Income (expenditure) transfers other than social contributions	39,980	111,896	5,198
Capital losses on existing assets and liabilities	-	-	10,014
Allowance for reserve fund	-	-	-
Allowance for fund allocated to investment	-	-	-
Allowance for funds allocated to income	-	-	-
Allowance for provision for risks and expenditure	20,000	-	288,246
Overall net accounting result	470,579	334,983	-3,571,102
Overall total expenditure	17,795,772	17,955,082	17,341,112
Income			
Services invoiced	8,755,087	8,391,412	7,949,972
Interest and other financial income	-	-	56,140
Exceptional income	-	3,884	-
Income transfers other than taxes and social contributions	9,040,686	8,894,769	9,335,000
Allowances for provisions for future risks and expenses	-	-	-
Allowances for reserve funds	-	-	-
Overall total income	17,795,772	17,290,065	17,341,112

Negative outcome	Services invoiced	Allocation
-7,141,576 €	7,949,972 €	9,335,000 €

Balance sheet

Investissements

The investments were the most remarkable event of 2022, and were the result of the 2021 investment plan, which was largely postponed to 2022 following scarcity in the integrated circuit markets the previous year. These acquisitions also gave rise to a remarkable depreciation charge, which rose from 1,400,000 euro to 2,600,000 euro.

Provisions for risks and expenses

A provision has been set aside to cover the additional staff costs for 2022 arising from the implementation of the Royal Decree on ICT, providing for a revision of the status and pay scales of staff working in this field.

Payables and receivables

The significant increase in accounts payable within one year to third parties not subject to the General Accounting Plan (GAP) is due to the fact that purchase investments were made at the end of 2022.

Accounts receivable within one year from third parties not subject to the General Accounting Plan (GAP) continued to increase in 2022. Here again, the increase is largely attributable to the receivable against the VAT administration (+1,500,000 euro).

Balance sheet, in euros	Financial year 2020	Financial year 2021	Financial year 2022
Assets			
Tangible assets	2,697,313	1,959,771	5,813,503
Debts more than a year old payable by third parties not subject to the GAP	43,630	34,900	34,900
Debts a year old at most payable by third parties not subject to the GAP	1,916,007	1,969,271	3,659,073
Debts a year old at most payable by third parties subject to the GAP	2,492,753	1,898,364	2,263,680
Certificates and treasury bills	17,193,000	17,193,000	17,193,000
Demand bank accounts and postal orders - cash deposits and stamps	7,548,934	8,898,937	3,756,896
Asset balancing and pending accounts	804,719	758,059	189,862
Total assets	32,696,357	32,712,301	32,910,914
Liabilities			
Net assets or net corporate assets or liabilities	10,269,826	10,604,809	10,780,830
Reserve funds	821,888	821,888	821,888
Funds allocated for investment	18,295,000	18,295,000	14,547,877
Funds allocated for income	-	-	-
Provisions for risks and expenditure	20,000	20,000	288,246
Debts a year old at most payable to third parties not subject to the GAP	2,486,047	2,137,490	5,536,385
Debts a year old at most payable to third parties subject to the GAP	767,525	798,346	931,533
Liabilities balancing and pending accounts	36,071	34,768	4,155
Total liabilities	32,696,357	32,712,301	32,910,914

Budget outcome

The budget outcome is

-7,141,576 euro

17,341,112 euro (income)
-24,482,688 euro (expenditure)

Allocation for operation and other financing

The allocation for 2022 amounted to 9,335,000 euro and included the additional amount of 571,000 euro made available to cover exceptional inflation encountered for staff costs, operating costs and energy costs.

Summary of budget accounts	Financial year 2020	Financial year 2021	Financial year 2022
Expenditure (1000s euros)			
National lines	3,343	3,069	2,326
European lines	692	415	130
Maintenance of network equipment and services	3,794	3,490	4,754
Overhead costs	1,641	1,449	3,540
Wages	5,664	6,327	7,269
Investments	2,140	676	6,463
Allocations to the Reserve Fund	-	-	-
Total	17,274	15,427	24,482
Income (1000s euros)			
Transfers within an institutional group	8,773	8,895	9,335
Extraordinary income	-	4	56
BNIX Belgium	640	829	761
BNIX International	224	231	333
Sale of products and services	7,889	7,326	6,856
Capital transfers from EU institutions	267	-	-
Total	17,793	17,285	17,341

Services offered
by Belnet in 2022

Cloud

- Belnet Storage
- GÉANT Cloud Solutions
- Belnet FedSender

Community Support

- Belnet FTP
- Belnet Service Desk
- Belnet Portal

Trust & Security

- Belnet DDoS Mitigation
- Digital Certificates Service
- Belnet Advanced Mail Security
- Belnet Threat Intelligence
- Advanced DNS Security
- eduVPN

Identity, Mobility & Federation

- FileSender
- DMPonline.be
- Orfeo
- viaBel.net
- Belnet R&E Federation
- eduroam
- govroam
- Belnet guestroam

Connectivity & Internet

- Internet connectivity
- Belnet Leased Line
- Belnet Media Transport Service
- Network Time Protocol
- Belnet Cloud Connect - MS AZURE
- DNS Service
- Domain Name Registration
- Fiber Channel
- International connectivity
- Multipoint

Implemented in 2022

- **Advanced DNS Security** offers in-depth protection for public sector, research and education organisations to better secure their DNS connections. In addition to automatic and proactive detection, Advanced DNS Security features a detailed dashboard to review their performance by monitoring all DNS queries and blocked threats. This dashboard can be fully customised with custom reports and alerts.

- **eduVPN** allows users to access their organisation's network easily and securely through VPN servers managed and hosted on the Belnet network backbone. eduVPN is an open-source solution that is very cost effective and easy to implement.

- **viaBel.net** has a new interface since 2022. This application is available to all Belnet R&E Federation member organisations to quickly, securely and efficiently reduce the size of the URLs.

Federal Department of Justice

Belnet
dedicated connectivity

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