Annual report 2023

Belnet

Connecting communities

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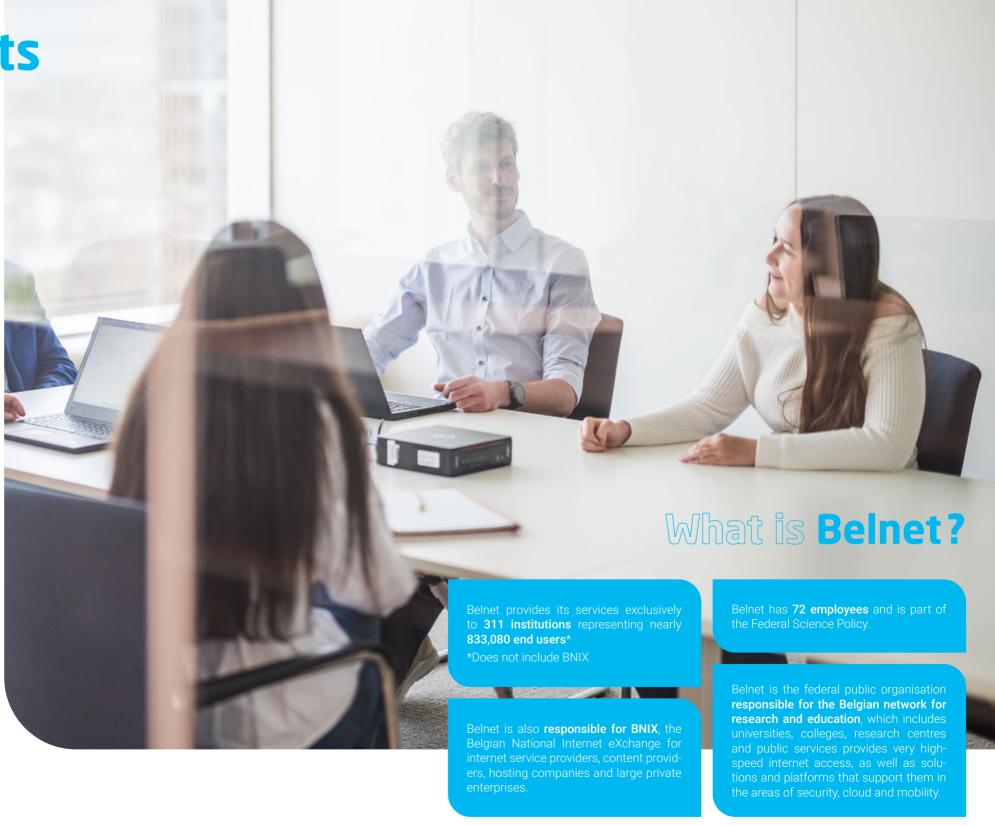
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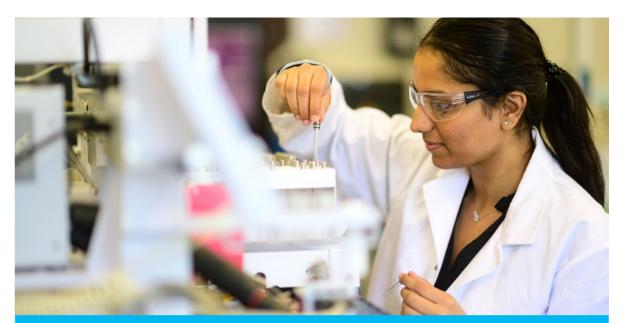
Budgetary results and general accounts





When it was founded in 1993, Belnet had just three employees responsible for a research programme integrated within the Federal Science Policy. Thirty years on, 72 staff members ensure the smooth running of IT services for research institutions, higher education establishments and federal and regional administrations. Belnet has become a key player on both the Belgian and international stage.

Coincidentally, Dirk Haex is also celebrating 20 years at Belnet. Starting as a Senior Engineer and progressing to Acting General Director, after having served as Technical Director, he has witnessed and contributed to Belnet's transformation into a mature and versatile organisation. In interviews with the De Tijd newspaper and the communications agency Charly PR, he shares his views on the past, present and future of the national research and education network. Here, we summarise his insights, as published in January 2024.



Three decades of passion and challenge

What is Belnet's **mission**?

D.H.: Belnet is first and foremost the **national research network**. Over 650,000 students, teachers, researchers and administrative staff across 147 institutions – colleges, universities, research centres, hospitals and federal scientific institutions – use it to exchange large volumes of data securely. The **eduroam** service enhances mobility by providing students with secure access to their own wireless network, as well as those of other participating organisations.

In fact, Belnet **impacts almost all Belgian residents**, as many digital public services, such as My eBox, Tax-OnWeb and MyPension, are provided to citizens and businesses through our network.

Additionally, **BNIX**, our Belgian internet exchange, carries a large amount of the internet traffic that people consume at home or at work, via ISPs (Internet Service Providers) such as Proximus and content providers like Netflix.

Belnet also contributes to **technological progress in other areas**. For example, as a mandated organisation of the EOSC Association, Belnet is supporting the transition to Open Science, and as part of the BeQCI consortium we are deploying a Belgian quantum communication network. We are also part of the pan-European research network, GÉANT.

In summary, over the past three decades, Belnet has gone from strength to strength across an ever-widening range of activities.

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How will your community's **needs** evolve?

D.H.: When we look to the future, this is particularly relevant to the **Research & Education community**, our original customers.

Universities, colleges and research centres - as well as our other customers - are increasingly focused on "solutions" rather than "resources". In response, in recent years, we have prioritised developing an **ecosystem of partners** including federal and regional bodies as well as businesses.

The key trends that will emerge in the coming years include the **acceleration of digitalisation** and consequently the increased use of digital technologies, **flexible learning**, continued **internationalisation and the resulting partnerships**.

There will also be stronger ties between higher education, industries and businesses, to enable

students to experience new working methods in practice. Belnet's policy on this last point has been very clear for 30 years: interns and PhD students are always welcome!

In this context, Belnet remains a forward-looking, cross-disciplinary organisation and a trusted partner for higher education and the entire research sector.

Our unique and privileged link to and connection with GÉANT is a major advantage in this regard.

Our cooperation with other European research networks within the GÉANT Association brings considerable rewards including favourable financial conditions and enhanced capacity for action, all to the benefit of our community.



«The added value that Belnet has brought to our country and its citizens over the past three decades is incalculable. Belgium's prominence in the fields of scientific research, innovation and prestigious higher education institutions is based in part on the commitment and dedication of the entire Belnet team. That is why I would like to extend my sincere thanks and warmest wishes for the future.»

Thomas Dermine, State Secretary in charge of Science Policy



How can these **trends** be incorporated into the **strategy**?

D.H.: Under its "INNOVATION" pillar, Belnet will contribute to various fields aligned with the community's expectations, such as quantum communication, the life cycle of (research) data associated with the EOSC ecosystem envisaged by Europe, cybersecurity and artificial intelligence.

As part of its "SOLUTIONS" offer, Belnet - based on the specific needs of our R&E partners - will continue to focus on providing highly stable, secure and high-performance connectivity, a comprehensive and customisable range of cloud solutions, various building blocks for the crucial "TRUST & SECURITY" pillar and, finally, a specific and targeted set of solutions for the "IDENTITY, MOBILITY AND FEDERATION" pillar.

Data and **cybersecurity** will play an increasingly important role in this context.

How will Belnet contribute to **GÉANT's** future?

D.H.: **GÉANT** is a consortium of **36 national research networks**, of which Belnet is a member.

This network, which is crucial for all Belnet customers and their end users, facilitates cooperation and data exchange between research institutes and universities at European level. That is why so many innovations originate from GÉANT.

Until now, GÉANT has mainly operated through European projects. However, in the coming years, the association will evolve – according to the strategy defined by Europe – towards an organisation that provides more end-to-end services.

GÉANT could then become the **driving force** and, depending on the services required by research institutions, establish the **necessary operational-level agreements with the relevant national research and education networks**.

I am personally involved in shaping this future as a member of the GÉANT Association for Belnet, while several of my Belnet colleagues represent the Belgian R&E community in various Task Forces and Special Interest Groups. In short: "Unity makes strength!"

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Do you see **Al** as an opportunity or a curse?

D.H.: There is no doubt that AI will have a significant impact on society in the short and medium term. However, I am not among the pessimists. There was a time when people predicted that the World Wide Web would lead to our downfall, and while the internet has posed many challenges, the overall outcome has been very positive so far.

Al can be used thoughtfully, but the **government has** an important role to play in this regard. While the European Union's Al Act is a step in the right direction, I do wish things were moving a bit faster. The emergence of non-transparent systems, such as **black-box** systems, is a real cause for concern. And we urgently need greater clarity on many ethical issues, such as misinformation through "deep fakes" and copyright issues.

D.H.: Over the past two years, we have invested heavily in **new protection platforms** (Belnet Advanced DDoS Security) and in **recruiting experts** to handle these types of volumetric attacks.

How does Belnet

DDoS attacks?

protect itself against

In addition, the federal government, along with Belnet as a partner to the entire higher education, research and public services sectors, will be affected by the NIS2 Directive. This is an important update to European regulations on securing networks and information. In total, we are talking about an investment of several million euros.

What about **quantum communication**?

D.H.: Quantum computing has **incredible potential for data encryption**. At present, no encryption method is totally foolproof. Any mathematical key can be cracked especially with the computing power of quantum computers. This is why, for ultra-confidential messages between governments, keys are sometimes delivered physically (a person carrying a briefcase) rather than transmitted digitally.

However, what mathematics cannot do, physics can. Quantum mechanics, and more specifically Quantum Key Distribution (QKD) offers the theoretical possibility of sending a 100% secure message. Anyone intercepting such a QKD key would automatically alter the code due to the principles of quantum mechanics, making the message "unbreakable". This technology is still in its infancy but is promising.

What about cybersecurity at Belnet?

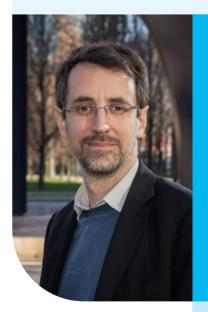
D.H.: Cybercrime is, and remains, a constant threat. As in the physical world, practices evolve, and we must strive to **stay one step ahead of the hackers**. Fortunately, simple measures can often help to mitigate the damage

Within our community, **staff and students are the largest targets**. Higher education institutions have a very large number of end users which inevitably increases the risk of negligence. This makes them prime targets for cybercriminals.

Through social engineering, attackers impersonate trusted individuals or organisations to obtain login credentials. They then penetrate deeper into the

network, before eventually launching their attack. That is why **multi-factor authentication** should be standard practice in all organisations.

When discussing cybersecurity, we cannot overlook the **role of AI**. Much like gunpowder in its time, AI was developed as a tool but has also become a weapon. AI allows for the rapid development of new strategies to respond to increasingly dynamic attacks. However, I am not a scaremonger; I also see AI as a **source of solutions**.



«Over the years, Belnet has established itself as a key partner for the research community and public services in Belgium. The reliability of its services and the professionalism of its teams have been demonstrated extensively in recent years, including during complex situations such as the increasingly common DDoS attacks, which make network access particularly challenging. Belnet is ready to face tomorrow's challenges by staying attuned to its community and expanding its range of services not only to meet, but also to anticipate future needs.»

Arnaud Vajda, Chairman of FPS Science Policy

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What is Belnet's role in the **BeQCI** project?

D.H.: Secure message transmission is crucial for research centres and administrations which are part of our community. Belnet has the highly specific expertise needed to deploy a quantum communication network.

In Belgium, we are working with the other partners in the BeQCI consortium to set up such a **QKD network**, and we are testing it through various use cases. As we are **always on the lookout for new use cases**, we welcome proposals from governments, research institutes, hospitals and the private sector.



D.H.: For scientific organisations like **Sciensano and the Royal Belgian Institute of Natural Sciences**, having access to the most recent studies enables them to quickly produce (literally) vital critical analysis and advice. This is even more important in a rapidly evolving social context, as we saw, for example, with the speed at which the coronavirus mutated during the pandemic and with the impact of climate change.

In the long term, open science aims to maximise the benefits of all publicly-funded research by making it shareable as quickly as possible, both within the scientific and academic communities and with businesses and science enthusiasts.

However, open science is technologically complex, and the European Open Science Cloud (EOSC) is **Europe's answer to this challenge**. The European Union,

member states and scientific research institutions are working tirelessly to create a **FAIR** (Findable, Accessible, Interoperable, Reusable) data and services network for research across Europe. This is a highly ambitious project. In 2020, EOSC mandated Belnet with a dual mission of coordination and operational support.

At the last annual symposium in Madrid, it became clear that EOSC had made significant progress, although there is still a long way to go.

I was also very interested in the efforts being made **globally**, beyond Europe, and I can see that we are all facing the **same problems and questions**.

Nevertheless, our participation in the symposium confirmed that Belnet's involvement in the **EOSC project** is having a real impact on the scientific community.



What are the plans for the **BNIX** platform?

D.H.: Our society has an insatiable appetite for data. People are streaming more and more and major internet service providers such as Proximus, Microsoft and Netflix are transmitting enormous volumes of data.

In addition, **remote working** is here to stay, along with all the data traffic it entails. But most importantly, since it's impossible to predict what the future holds, we want the **BNIX platform to be prepared for any eventuality** which means we need to **anticipate** them.

This is the aim of a **brand-new platform** which will be deployed in the first half of 2025. It will not only offer **significantly higher capacity** but will also be much better suited to the **needs of member organisations**.

Can you tell us about a **highlight** in your career at Belnet...

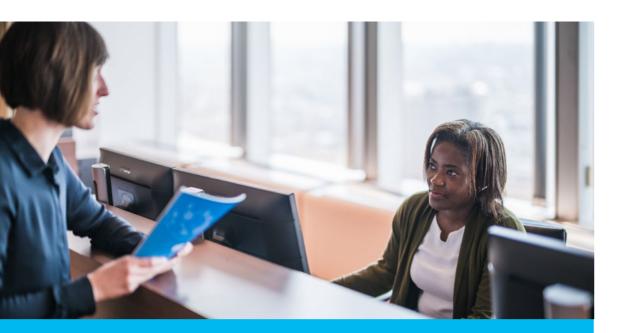
D.H.: I could mention any of the Belnet milestones we've just discussed. But since you already know about those, I'd like to share an **anecdote** that many of my colleagues probably don't know.

I was very excited about Belnet's move from the Rue de la Science to Avenue Louise - perhaps a little too excited. At the time, I was still a network engineer and, in my enthusiasm, I started unplugging network cables in the technical room, thinking that they were no longer in use. Turns out, they were very much still in use.

Suddenly there was no connection to the outside world, and of course, I had no idea which cable to plug into which switch port...

Anyone familiar with these ports can imagine the number of hours I spent trying to put everything back together. Fortunately, there were no major issues;)

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Belnet in practice

Our mission

By developing secure, reliable and innovative network infrastructures and associated services with and for our communities, Belnet, as the national research network, contributes to building the education, research and government of tomorrow.

Belnet's mission is to operate a high-performance network for universities, colleges, research centres and public administrations. The Belnet network also serves as a gateway to other research networks worldwide, making it a driving force for (inter)national cooperation in education and research.

Furthermore, our network is a key component of the federal government's digital services. As an IT partner, we contribute to the efficient use of available resources by maximising synergies and economies of scale.

Belnet is constantly working to offer services tailored to the specific needs of its communities. We develop and manage solutions and platforms that support them in terms of security, cloud and mobility. Collaboration, co-creation and innovation are our driving forces

Our employees are committed every day to helping our communities achieve their core activities: educating future generations, stimulating scientific research and innovation, and facilitating digital transformation.

Due to its neutral position and expertise, Belnet also manages the Belgian National Internet eXchange, BNIX, which makes local Internet traffic faster and more efficient.

Our vision

To be an indispensable partner for our communities by offering innovative and reliable IT solutions that enable them to excel.

We strive to gain an in-depth understanding of the needs and requirements of our communities by proactively engaging with them. This allows us to provide valuable, innovative solutions essential to their core activities.

The strategic partnership with Belnet enables our communities to meet the major challenges facing society and seize all the opportunities brought by digital transition.



Our values

Reliable

Belnet is a reliable, stable, non-commercial and neutral partner to its stakeholders. We work openly and transparently in the interests of our communities.

Dedication

Belnet remains attuned to and develops services tailored to the specific and constantly evolving needs of its communities. Together, we strive for excellence.

Committed

Our colleagues feel connected to each other, our organisation and our communities. Their involvement gives them a deep understanding of our communities' institutions and their needs, allowing them to provide the most appropriate solutions.

Passionate

Our colleagues are proud of what they do and enjoy their work. Their passion drives them to meet the challenges of our communities.

Our strategic objectives

Operational excellence

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

Security

Information security is a priority and an essential element of its operating method, services and activities.

Dedicated services

Belnet provides services that meet the specific needs of its customer group.

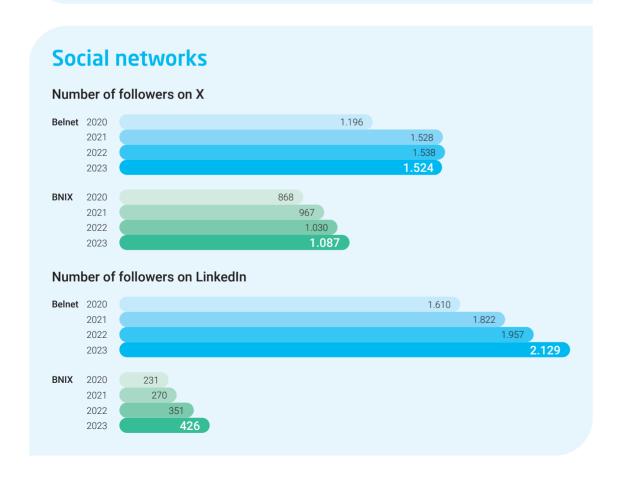
Performing organisation

Belnet is a professional, high-performing organisation that is perfectly adapted to fulfilling its mission.

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Belnet in 2023

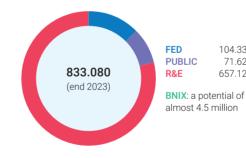
Employees Evolution of the number of employees 2021 2022 2023 **Employee profiles** 1. CISO & DPO B&C Platforms, Product & Innovation, Direction Marketing & Communication, Business Risk Office¹ Unit R&E/Public, Business Unit FED/BNIX, Order Delivery Business & Community Department² 19 3. Management Support, Legal, Purchasing, Corporate Services Department³ 14 Finance, Human Resources, Reception 4. Networks, ICT-Logistics, Services & Engineering & Operations Department⁴ 37 Security, Project Management Office, Information Technology Service Management



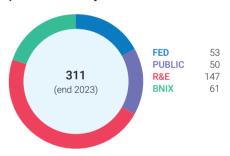


Belnet network

Number of end users per Community



Number of institutions per Community



Evolution of the number of end users



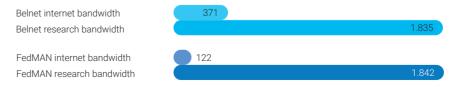
104.335

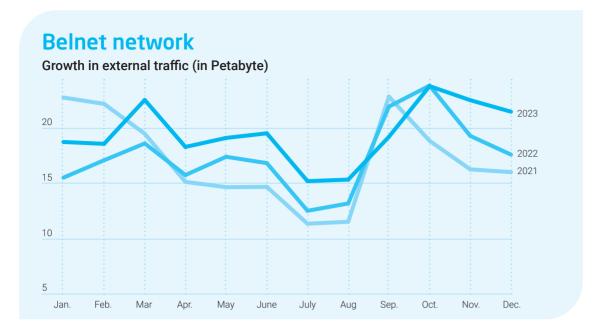
71.621

657.124

* Does not include the BNIX business model

Total access capacity of customers, in Gbit/s





Belnet Leased Line (BLL)

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

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

Evolution of the number of requests



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 organisations.

Number of customers using DCS



Total number of certificates issued



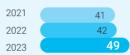
eduroam, govroam and Belnet guestroam

Number of customers using eduroam



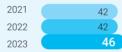
eduroam is a service that provides users at research and higher education institutions with simple, secure access to both their own organisation's wireless network and also to the networks of other participating organisations worldwide.

Number of customers using govroam



govroam is a service that allows civil servants to browse the internet securely and wirelessly across all affiliated public services organisations in Belgium.

Number of customers using Belnet guestroam



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, secure applications for sending very large files.

FileSender - Number of uploads



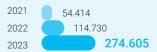
FedSender - Number of uploads



FileSender - Number of downloads



FedSender - Number of downloads



FileSender can send files up to 5TB. This service is available 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 public institutions that are members of the FedMAN network and G-Cloud users (the Belgian government's community cloud).





DATA CENTERS



PARTICIPANTS (including 6 new ones)



INFRASTRUCTURE

13,2_{Tbps} is the switch capacity

Active connections: number and types

100 Mbit/s connections

10 Gbit/s connections



1 Gbit/s connections

100 Gbit/s connections

The «Belgian National **Internet Exchange»** in figures: internet traffic on BNIX platform increased by 36% in 2023

After a slight decline in 2022, internet traffic on the BNIX platform increased sharply in 2023, to an average of 270 Gbit/s, an increase of 36%. Several peaks exceeded 440 Gbit/s, making 2023 was a record year. BNIX is the national internet node through which much of Belgium's internet traffic passes.

This increase followed a normalisation after the spikes caused by the corona measures in 2021. Frédéric Libotte, who is co-responsible for BNIX as Senior Relationship Manager at Belnet, clarifies, "Compared to the previous record year 2021, when numerous measures were in place, the increase is smaller, around 20 per cent, but still significant."

According to Frédéric Libotte, there are several reasons why traffic picked up tremendously in 2023. "2022 was a kind of post-COVID transition year, and we were already noticing a rise at the end of that year. This set the trend for 2023, partly because digitalisation is speeding up again - this aligns with what we are seeing on our other networks such as Belnet and FedMAN. Governments and banks, for example, are organising more and more interactions with citizens and customers via digital tools, and the shift to the cloud in business is in full swing."

"Privately, we also see that content consumption keeps rising - increasing numbers of people are watching and listening online in ever higher resolution. To keep up, participants are increasingly upgrading their connections to BNIX. With the arrival of a major international telecommunications group, we also welcomed very large new participants. This, like the partnership with LU-CIX, has certainly affected the figures, but all in all the trend is very clear."

Snowy peaks

The highest average daily traffic was reached on 8 March, with an average of 300 Gbit/s of data passing through BNIX that day. "Not surprisingly a snowy Wednesday," explains Frédéric. "Wednesday is a typical work-from-home day as it is, and the snowfall convinced even more people not to go into the office. Moreover, traffic related to content providers such as Netflix was also at its highest on Wednesday that week - peaking at 424 Gbit/s in the afternoon - whereas usually this happens on Sunday."

The three highest peaks - the exact traffic at a single moment - were recorded on Monday 6 March 2023 (462 Gbit/s), Monday 6 November (457 Gbit/s) and Thursday 7 December (444 Gbit/s). Frédéric Libotte: "Such peaks are often caused by many smaller and unrelated circumstances and are therefore more difficult to explain. What does stand out, however, is that during the working week, plateaus in the morning and afternoon remain higher than those in the evening, unlike before the pandemic. An exception to this is special events, such as Red Devils games."

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Budgetary results and general accounts

Positive budgetary result

Services invoiced

Allocation

3,178,980 € 7,863,819 € 13,406,687 €

Profit and loss account

Reserve and investment funds

In 2023, a decision was made to centralise all reserves earmarked for infrastructure renewal in a single investment fund. At the same time, a separate fund was created to cover financing needs over several years, related specifically to the implementation of major federal entities linked to the FedWAN programme (notably the FPS Justice and FPS Finances). This major multi-year programme, financed by the transfer of allocations, obviously has a time limit, as implementation projects typically span two years when a significant number of lines need to be transferred.

Income

The allocation received an additional EUR 4 million, entirely sourced from the allocation transfer within the federal scope for the implementation of the FedWAN programme.

Additional income, related to the Innovation unit's projects and linked to European funding (+EUR 1.2 million) was also recorded. This came from the closure of certain projects and the pre-financing of others.

Investing the remaining reserve amounts with the Federal Debt Agency, coupled with the market recovery, resulted in a positive financial return of +EUR 476.000.

Expenditure

The amount spent on goods and services in 2023 remained under control. While inflation led to a noticeable increase in costs, controlling requirements and streamlining and delaying the placing of orders for certain services has resulted in savings.

It is also worth noting the increase in depreciation, including additional network infrastructure investments of nearly EUR 3 million in 2023.

Personnel costs rose by 7%, reflecting indexation and adjustments related to the implementation of the Royal Decree on ICT, despite departures and non-replacement.



Profit and loss account, in euros Expenditure	Financial year 2021	Financial year 2022	Financial year 2023
Other use of consumer goods and third-party services	9,366,059	10,729,862	9,074,183
Property tax and miscellaneous taxes	-	-	-
Direct and indirect employee remuneration	6,716,487	7,269,794	7,766,539
Economic depreciation on establishment costs, intangible assets and tangible assets	1,425,657	2,609,100	3,060,193
Income transfer (expenditure) other than social benefits	111,896	5,198	23,463
Capital losses on existing assets and liabilities	-	10,014	-
Allocation to reserve fund	-	-	-
Allocation to dedicated investment fund	-	-	1,180,000
Allocation to dedicated income fund	-	-	648,000
Allocation to provisions for risks and charges	-	288,246	288,246
General accounting result	334,983	-3,571,102	1,492,843
Total expenditure	17,955,082	17,341,112	22,956,975
Services invoiced	8,391,412	7,949,972	7,864,807
Interest and other financial income	-	56,140	476,829
Exceptional income	3,884	-	-
Income transfers other than taxes and social contributions	8,894,769	9,335,000	14,615,339
Reversal of provisions for future risks and charges	-	-	-
Reversal from reserve fund	-	-	-
Total income	17,290,065	17,341,112	22,956,975

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Balance sheet

Investments

In 2023, reversal transactions and allocations to reserves were completed, confirming that the financing of the investments made was fully accounted for by the dedicated investment fund.

The «FedWAN implementation» reserve should allow for self-financing of the programme's implementation and record the multi-year processing of incurred costs, while confirming a zero balance at the end of the financial year, scheduled for 2027.

Provisions for risks and charges

Provisions for personnel costs were reversed in 2023. No provision for holiday pay was made in accordance with the procedure introduced by BOSA-PersoPoint, which localises the provision at BOSA service level.

This provision is distributed monthly with the payment of salary charges to BOSA. Belnet has identified the receivable from BOSA on the asset side of its balance sheet for the corresponding amount (EUR 288.5 thousand).

Debts and receivables

Receivables within one year from third parties not subject to the General Accounting Plan (GAP) continued to rise in 2022. Here again, the increase is largely due to the receivable against the VAT administration, which reached EUR 3.3 million by the end of 2023.

Balance sheet, in euros Financial year Financial year Financial year 2021 2022 2023 **Assets** Tangible fixed assets 1,959,771 5,813,503 5,667,120 Receivables due in over one year from third parties not subject to the GAP 34.900 34.900 55.920 Receivables due within one year from third parties not subject to the GAP 1,969,271 3,659,073 4,247,905 Receivables due within one year from third parties subject to the GAP 1,898,364 2,263,680 2,059,595 Treasury certificates and bills 17,193,000 14,193,000 17,193,000 Bank accounts and cash assets 8,898,937 3,756,896 5,401,017 Asset adjustment and suspense accounts 758.059 189.862 1.752.535 32.712.301 32.910.914 33.377.091 Total assets Liabilities Net assets or net corporate assets or liabilities 10.604.809 10.780.830 14.858.875 Reserve fund 821,888 821,888 821,888 Funds allocated for investment 18.295.000 14.547.877 13.142.676 Funds allocated for income Provisions for risks and charges 20,000 288,246 Debts payable within one year to third parties not subject to the GAP 2,137,490 5,536,385 3,241,246 Debts payable within one year to third parties subject to the GAP 798.346 931.533 664.407 Liabilities adjustment and suspense accounts 34,768 4,155 Total liabilities 32.910.914 33.377.091 32.712.301

Budgetary results

The budgetary result is

3,178,980 euros

22,956,974 euros (income) - 19,777,997 euros (expenditure)

Operating allocation and other financing methods

In 2023, the allocation amounted to €13,406,687. This increase included both the first wave of allocation transfers under FedWAN (+EUR 2.88 million) and an additional EUR 1.4 million as per a decision by the Council of Ministers in July 2023 recognising Belnet's need for additional funding to cover the increase in costs related to the FedMAN services, the exceptional inflation of recent years (+EUR 728 k) and the personnel costs resulting from the implementation of the Royal Decree on ICT in 2022 (+EUR 422 k). This amount also covers the cost of hiring external consultants due to delays in recruiting the internal staff needed to meet human resources requirements (+EUR 250 k).

Overview of budget accounts	Financial year 2021	Financial year 2022	Financial year 2023
Expenditure in thousands of euros			
National lines	3,069	2,326	3,255
European lines	415	130	198
Maintenance of network infrastructure & Services	3,490	4,754	3,365
Overheads	1,449	3,540	2,268
Salaries	6,327	7,269	7,777
Investments	676	6,463	2,914
Allocations to the reserve fund	-	-	-
Total	15,427	24,482	19,778
Income in thousands of euros			
Transfers within an institutional group	8,895	9,335	13,407
Exceptional income	4	56	478
BNIX Belgium	829	761	681
BNIX International	231	333	364
Sale of products & services	7,326	6,856	6,819
Capital transfers from EU institutions	-	-	1,209
Total	17,285	17,341	22,957

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Services offered by Belnet in 2023



Cloud

- · Belnet Storage
- · GÉANT Cloud Solutions
- · Belnet Private Cloud Connect
- · Belnet FedSender



Community Support

- · Belnet FTP
- · Belnet Service Desk
- · Belnet Portal



Trust & Security

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



Identity, Mobility & Federation

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



Connectivity & Internet

- · WAN Connectivity
- FEDWAN Connectivity
- 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 2023

Strengthening cybersecurity with a crisis exercise programme

In November 2023, Belnet took a decisive step to enhance cybersecurity in Belgium's academic institutions by launching a cybersecurity crisis exercise programme. The first target group for this programme was the country's universities.

A new service: eduVPN

This service is designed to provide a secure VPN for students, researchers and employees, enabling them to access university and research resources securely, whether on campus or remotely.

Renewal of the Anti-DDoS Protection Service

This enhanced service replaces the previous version, and is designed to protect connected institutions against massive attacks that could disrupt or paralyse their online activities.

Renewed cooperation with the Regions

Belnet has renewed its cooperation agreements with the Wallonia and Flanders regions, allowing research and educational institutions in these areas to continue benefiting from highly favourable connectivity conditions.

In development

New website

Belnet has begun preparations to launch a new website, designed specifically to meet the needs of its various user communities more effectively.

WAN programme with the Federal Public Services

Belnet has launched an ambitious WAN programme for the federal public services in partnership with Telenet, which won the public contract.

Boosted project with the Royal Observatory of Belgium

This project aims to develop an optical network for time-frequency transfer (T&F) in Belgium and connect it, via France, to the European metrology network.

Participation in the new OCRE tender with GEANT

Belnet played an active role in preparing the new OCRE (Open Clouds for Research Environments) tender. This call for tenders is vital in providing research institutions in Europe with access to high-quality cloud services under advantageous conditions.

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NOTES	NOTES NOTES

Belnet

Connecting communities

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