

Annual Report 2020



Peak Traffic Record

9.4 Tbps

AMS-IX – Annual Report 2020

Connecting you to everyone and everything

Contents

4	Word from the CEO
12	AMS-IX in 2020
14	Board statement
20	Board report
24	2020 in numbers
28	Word from the CFO
34	Auditor's report
36	2020 in pictures
40	Word from our commercial department
48	Home Offices
50	Word from our Manager Delivery & Operations
54	A lifetime of AMS-IX with Henk Steenman
62	AMS-IX around the world
64	Word from Marketing & Communications
72	Word from HR
76	Colophon



4

Word from the CEO



24

2020 in numbers



36

2020 in pictures



48

Home Offices



54

A lifetime of AMS-IX
with Henk Steenman

A portrait of Peter van Burgel, Chief Executive Officer, standing in front of a modern building with a glass and steel facade. He is wearing a blue blazer over a white shirt. The background is slightly blurred, showing the architectural details of the building.

Peter van Burgel
Chief Executive Officer

Word from the CEO

2020 will go down in history as the year in which the modern world confronted the first truly global pandemic. AMS-IX CEO Peter van Burgel shares his experiences as head of AMS-IX.

“The COVID-19 outbreak had a huge impact on society. Daily life was severely disrupted as a result of all the governments’ containment measures. The healthcare sector suffered (and still suffers) heavily. Governments around the world struggled to get on top of the pandemic, keeping their citizens safe and the economy going. ‘The world’ started working from home almost overnight which resulted in a steep incline of Internet traffic. Many organisations realized they need(ed) to make serious work of their digital strategy. As one of the global leading Internet Exchanges, AMS-IX had a front row seat to these developments. The exchange saw double digit traffic growth and 3 milestone peaks in just over a year, approaching the 10 Tbps peak.

The Interconnectivity market

Public Peering remains an important form of Interconnectivity. This is demonstrated by the steep incline in traffic across Internet Exchanges throughout 2020. Based on the robust technology and diligent capacity planning of the platforms, most Internet Exchanges were quite capable of dealing with the surge of Internet traffic without any major incidents or delays. At AMS-IX specifically, we benefitted from investments in our own Digital Transformation. Many of our existing customers upgraded their capacity, confirming our key role in reliable and trusted facilitation of exchanging Internet traffic.

The number of new customers was relatively low in 2020, as most organisations implemented a budget freeze to wait and see what the pandemic would bring. As there seems to be some relief coming, the number of new customers has been picking up again during the first quarter of 2021.

Despite the capacity and traffic growth, the underlying trends have not changed fundamentally. Consolidation continues to drive change in mature Internet markets. In other parts of the world, such as the Middle East, South East Asia, South America and Africa there is rapid growth as more and more users get online to benefit from digital and mobile services. This is also reflected in the growth of sea cables and data centres in those parts of the world. Finally, with technology trends such as Internet of Things (IoT), Edge and the push for 5G we are heading to a hyperconnected society that will require a solid mix of interconnectivity solutions, including Public Peering.

Another important development is governments changing attitude towards “Digital”. All aspects of life and society are moving to the virtual world, such as business, social

interaction, criminality, national security, even espionage. Governments themselves are also becoming more digital in their interaction with their citizens and businesses. Furthermore, digital society has its own dynamic and challenges. These include, for example, issues around privacy, fake news, questionable content - and worse. Governments are trying to keep up and introducing appropriate policies and laws.

AMS-IX supports the greater good through investments in public interests and affairs. As a result, we are in regular contact with government agencies on most of these topics. However, the challenges are truly global and do not stop at nations' borders. Therefore, as an industry, we need to continue investing in the relationship with governments to bridge knowledge gaps and ‘differences’ to implement good, solid policies for our Digital Society. Policies that allow the technology to develop, but also protect citizens and organisations with regard to privacy, security and equal opportunity.

Long term strategy – Innovate, Optimise, Grow

Based on our purpose of “building a better internet to contribute to a better society” we defined three Long Term Strategy pillars: Innovate, Optimise and Grow. Across all three strategic pillars, we see the results of the investments and hard work of the team. Together with a number of partners, we are developing new innovative solutions and services focused on open and neutral but secure Exchange of Data, specifically for Communities of Interest such as healthcare and other market segments.

Our tech team is constantly optimising the platform, deploying new technology and features to improve switching and routing efficiency. Although the platform could handle the strong growth, the team spend the second half of the year upgrading and updating the platform to support further growth.

Innovate

Innovation is essential to remaining relevant in a consolidating market. AMS-IX is investing in both Market and Product Innovation to develop new value-added services for its members and customers

Optimise

Every organisation needs to continuously optimise to increase efficiency and drive down cost. At AMS-IX, we are constantly looking for more efficient ways to run the platform and business. Therefore, we continue to invest in our Digital Transformation and create benefits from economies of scale for our customers

Grow

Size does matter. Scaling up will support the push for more value to our members and customers. Additionally, to support the greater good of the Internet and the interests of our members and customers, size matters to remain relevant and having a ‘seat at the table’ of the multiple realms of influence, such as the EU, local government and the various Internet organisations.

The investments in our Digital Transformation are showing with the release of new CRM and ERP tooling, phasing out legacy applications, updating the provisioning technology and preparing for end-to-end process automation and customer self-service. This also resulted in the launch of the new ams-ix.me community portal in December 2020. In 2021, new functionalities will become available every month.

Traffic growth

During the year, we experienced 35% traffic growth and almost 10% growth in 100 GE ports in Amsterdam alone, signifying the relevance of AMS-IX

and Amsterdam as a leading connectivity hub. International activities also experienced growth with Manama-IX in Bahrein becoming the largest international Internet Exchange for AMS-IX through the partnership with Batelco with over 200 Gbps of peak traffic in a year. Based on our IXaaS (IX as a Service) offering, we will expand further in India together with our partner Sify by adding 4 new exchanges in 2021. During the year, AMS-IX signed two more international deals with Telecom Egypt for a new Exchange in Cairo and with SNS for a new Exchange in Uzbekistan, which will both launch early 2021. International expansion will continue throughout 2021 and beyond with many opportunities already lined up.”

The company

“The pandemic also had a big impact on AMS-IX. No longer able to travel to events and meet our customers and members or industry peers meant that we had to think of new ways to interact with our stakeholders. Because a number of employees had been in ‘risk areas’ or ‘red zones’ in late 2019 and early 2020 we already put in place a number of Covid measures that helped us respond



quickly when lockdown commenced early in March. Throughout the year the team worked hard and supported colleagues in the difficult lockdown period. We also saw numerous initiatives from colleagues supporting each other, underpinning the pride of the AMS-IX team.

It took a while to get used to recruiting new employees through videoconferencing, let alone onboarding them, but we managed to do so and strengthen the team with a number of talented new colleagues. Of course, a number of colleagues also left the organisation, most notably Henk Steenman, who retired from AMS-IX in December after 18 years of service.

Henk has been involved since the early days of AMS-IX, at the start of the Association, but joined AMS-IX B.V. as CTO in 2002. In the following 18 years Henk played a pivotal role in shaping

AMS-IX into what it is today. It has been a personal privilege and honor to work with Henk for the past three years and we will miss his knowledge and experience. (On March 1st, 2021 Ruben van de Brink joined AMS-IX as the new CTO, taking over the responsibility for the full tech team.)

In terms of business performance, I am proud of the team. They have done a great job despite the challenging circumstances. We have made many improvements in a difficult operating environment, and we have been able to maintain our momentum. I am thinking of all the updates and upgrades to the platform, passing the ISO 27001 recertification audit, multiple releases in our Digital Transformation, but also the implementation of a new Employee Management system and updating our Core Values. We also laid the foundation for a Learning Management System and an upgrade of our mail and collaboration systems in 2021.

● **“In terms of business performance, I am proud of the team.**

They have done a great job despite the challenging circumstances.”

Last but not least, we agreed on a new Job Reference Framework together with the Works Council.

We are very fortunate that we are in a relevant space, and the demand for our services remains strong. Therefore, we have not been impacted nearly as much as many, many other businesses around the world.

2020 in numbers

AMS-IX is part of an industry that did not directly experience negative economic effects of lockdowns and other restrictive measures. This also shows in the financial results for 2020.

Gross revenues grew with 9% to EUR 21.0 million, primarily driven by growth in the Public Peering business and 100GE ports to deal with increased traffic due to working from home. Gross margin declined to 88.5% due to increasing datacentre costs.

Personnel costs increased 6% while the number of FTE declined to 59.1. The increase in costs is mainly due to the hire of outsourced labor to support the implementation of new ERP and CRM tooling. In the crowded Amsterdam market, hiring and retaining talent and quality staff remains a challenge.

A number of costs were lower than budgeted in 2019, most notably depreciation (EUR 1.3 million lower) and marketing and travel (EUR 0.5 million lower) due to lockdown and travel bans. Furthermore, a Deferred Tax Asset of EUR 0.2 million has been accounted for at 31 December 2020 as a result of dissolving AMS-IX USA, Inc. because the management believes compensation for tax purposes of part of the losses is likely.

We cannot do this alone

I want to thank our members and customers for their continued trust in our services and our partners for their support in providing those services. Of course, none of this would be possible without the continued effort and commitment of the AMS-IX team. The pride the team brings to serving our members and customers every day is a joy to see and be part of. Finally, I would like to thank the AMS-IX Board for their continued support, constructive dialogue and interaction with the management team and myself."

 **Peter van Burgel**
CEO AMS-IX



AMS-IX in 2020

Corporate Governance

AMS-IX places great value on its corporate governance structure. This provides the organisation with a significant degree of independence and neutrality, which contributes to our growth, continuity and global expansion. In this section, the corporate governance structure is explained in greater detail.

Governance Structure

AMS-IX consists of two separate legal entities: the AMS-IX Association and the AMS-IX Limited Company (in Dutch, Besloten Vennootschap or B.V.). The AMS-IX Association is the single shareholder of the Limited Company and the organisation and its staff are incorporated in the Company. The Executive Board of the Association consists of five people and also acts as the Supervisory Board of the Company.

AMS-IX B.V.

AMS-IX B.V. is empowered to take the majority of the decisions, within the boundaries set by annual and long-term plans approved by the Association and/or Supervisory Board. During quarterly board meetings, the Supervisory Board validates whether plans have been executed according to budget and business plan and approves the annual plans and budgets as well as items outside the scope of management control. The Company Management Team reports to the Supervisory Board on a quarterly basis.

Chief Executive Officer of the Company is Peter van Burgel. Mr. van Burgel chairs the Management Team, which further consists of a CTO, Director Sales and Marketing and CFO. In addition, the Company consists of technology, commercial and financial departments, as well as human resources and support staff. Next to operating the Internet Exchange in Amsterdam, the AMS-IX Company also operates AMS-IX Caribbean in Curaçao, AMS-IX India in Mumbai, AMS-IX Chicago and Bay Area in the United States and AMS-IX Hong Kong.

AMS-IX organisation structure

AMS-IX bodies	Association	Corporation
Meeting acts as	General Assembly	Shareholders meeting
Board acts as	Executive Board	Supervisory Board
Management acts as		Management



Board statement

**Continuing strategy execution
during the COVID-19 pandemic**



Bart van der Sloot
Chair

The board had a clear vision and goals at the start of 2020. Although there were challenging circumstances, significant progress was made on all parts of the general strategy. AMS-IX Chairman Bart van der Sloot reflects on the board's perspective during 2020.

"In 2017 AMS-IX agreed upon a new strategy, in close cooperation between members, management team, employees and board. The five pillars in this strategy were "create economies of scale", "service innovation", "develop new markets", "fix the basics" and "develop our people". During 2020 these pillars were consolidated into "Innovate", "Optimise" and "Grow".

In 2020 we saw continued strong progress in all three areas – in spite of challenging circumstances as a result of the COVID-19 pandemic. Growth in connected capacity and traffic accelerated during 2020 and the IX-as-a-Service found its way to

more new customers in new geographies. New services for enterprises and government institutions were evaluated. The Fix the Basics program continued, now delivering results to prepare the organisation for scaling up and becoming more efficient and innovative – focusing on optimising systems and processes.

Team changes and challenges

2020 was also a year of stabilization in the AMS-IX organisation and Management Team. However, 2020 also saw the retirement of CTO Henk Steenman - one of the founding fathers of AMS-IX - during the General Meeting (GM) in December.

- “We have a talented and enthusiastic pool of employees, an ambitious strategy and healthy financials – **nothing should stop us from reaching our goals.**”

This, of course, represented the end of an era. It was heartwarming to see that many members (including former board members) joined the GM and contributed to a video with personal farewell messages.

Due to the pandemic, the vast majority of the team transitioned to working at home. The AMS-IX Management Team took numerous measures to protect and keep engaging the team, which was well received by the employees. My personal favourite was CEO Peter van Burgel's initiative to personally deliver a Christmas gift to each employee's doorstep, dressed as Father Christmas (together with Christmas elf Adrienne).

Our markets

During 2020, the AMS-IX mission was refined to “to facilitate open and safe interconnection between everyone and everything”. In 2020, these IP interconnection markets continued to change, driven by factors such as continued steep price decline in alternative interconnection services (especially IP Transit), consolidation in access networks (where large networks increasingly tend to avoid IXes) and concentration of content traffic into fewer than 10 content providers (driving migration from IX services to Private Network Interconnects - PNIs).

These trends introduce threats as well as opportunities: high volume

traffic streams between large players may move to PNIs, but new players (including enterprises and government organisations) arise and see the value of a proven, trusted and neutral internet exchange to exchange traffic with their business partners – adding to the 'long tail' of connected parties and the ecosystem. AMS-IX continues to be a key element in the value of the Netherlands as an international digital hub, where many global players decide to establish their cloud infrastructure.

Board developments

In December 2019, we welcomed new board members Bernhard Pusch (Telstra) and Jan Thielemans (Arcadiz Telecom), who developed into solid contributors during 2020 – with Bernhard joining the Finance Committee and Jan joining the Governance and Compliance Committee. Due to the COVID-19 restrictions, onboarding was restricted to 'remote/online only' and we are looking forward to the opportunity to meet face-to-face again, and further intensify the cooperation.





Eric Loos (BICS – Treasurer) continued as member of the Finance Committee and Michael Ourabah (BSO Networks) joined me in the Compensation Committee.

The year 2020 was my fourth year on the board and third year in the Chair position. I have experienced the cooperation within the board, as well as between board and management team, as very positive.

Looking ahead

I have great confidence in AMS-IX' future. We have a seasoned and energetic management team, which is well aligned and has a constructive cooperation with the Executive Board. Ruben van den Brink has been recruited as successor for the CTO position. We have a talented and enthusiastic pool of employees, an ambitious strategy and healthy financials – nothing should stop us from reaching our goals.

We should not underestimate the importance of AMS-IX' neutrality and transparency, which has always been at the heart of AMS-IX, for (prospective) members and customers. This really sets AMS-IX apart from other parties that offer interconnection services

● **"In 2020 we saw continued strong progress in all three areas of our general strategy – in spite of challenging circumstances as a result of the COVID-19 pandemic."**

(typically bundled with or cross-subsidized by other services) and ensures maximum flexibility and a fair cost base for any company in need of IP Interconnection or associated services. In all my dealings with AMS-IX staff, I really recognize these values in the team – which will contribute to driving our success in the future."

On behalf of the Executive Board of the Association,

● **Bart van der Sloot**
Chair

Board Report

The Executive Board of the AMS-IX Association manages the association's business and is also appointed as the General Shareholder Meeting and Supervisory Board of AMS-IX B.V. (the "AMS-IX Company").

The Supervisory Board supervises and advises the CEO & Management Team whilst also ensuring AMS-IX Company follows the general course of affairs as set out in the annual and long-term strategic plans.



Michael
Ourabah



Bernhard
Pusch



Eric
Loos

Composition of the Board

Name	Organisation	Association Board member since	Next re-election	End term of office as an Executive Board member of the Association
Eric Loos	BICS	20 Dec 2016	Dec 2022	Dec 2028
Michael Ourabah	BSO Network	14 Dec 2018	Dec 2021	Dec 2030
Bernhard Pusch	Telstra	12 Dec 2019	Dec 2022	Dec 2031
Bart van der Sloot	Leaseweb	20 Dec 2016	Dec 2022	Dec 2028
Jan Thielemans	Arcadiz Telecom	12 Dec 2019	Dec 2022	Dec 2031



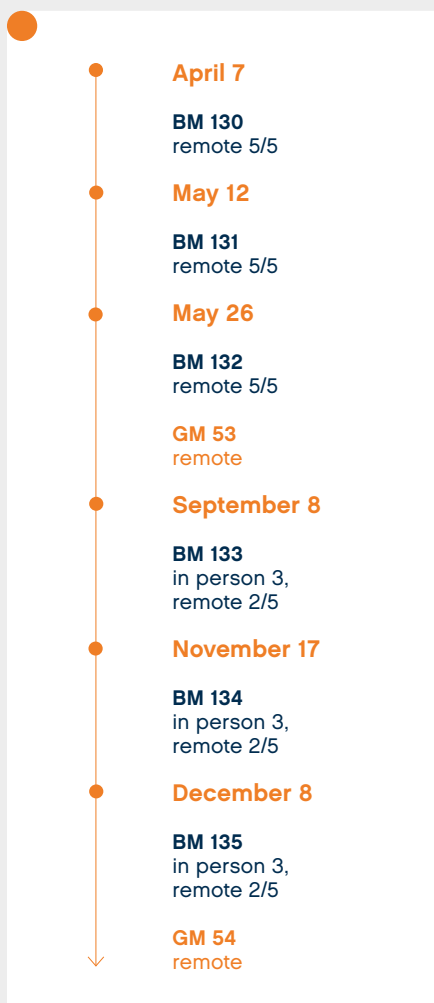
Bart van der Sloot



Jan Thielemans

Meetings and Activities of the Board in 2020

- Board Meeting
- General Meeting



In 2020, the Board held six meetings, with a mix of remote and in person participation (restricted due to COVID-19 measures). In addition to these meetings, the members of the Board and MT members of the Company are regularly in contact to discuss specific topics. These are typically covered in the “Finance Committee”, “Governance and Compliance Committee” and the “Compensation Committee”. The goal of these informal conversations is to ensure the Board remains well informed with regard to the running of the Company’s operations.

During Board meetings, the members of the Board reviewed and discussed matters concerning AMS-IX’s activities, business results, plans and strategy. Among other activities, the Board focused on reviewing the long-term annual plans and partner agreements as well offering advice on how to react to a changing peering and interconnection market.

In 2020 special attention was given to protecting the interests of all AMS-IX stakeholders (employees, members, customers, suppliers) during the COVID-19 pandemic – as well as to the ongoing execution of the strategy, especially in the areas of growth, innovation and transforming the processes and systems.

Attendance

All Board members attended every Board meeting in 2020. All Board members made sufficient time available for AMS-IX-related matters.

Remuneration

Participation on the Board is voluntary. There is no remuneration or compensation for this service. Only travel and hotel expenses are covered by the Company.

Conclusion

The Board would like to thank the Management Team and employees for their contributions in 2020.

Amsterdam, February 22, 2021.

 **Bart van der Sloot**
Chair

2020 in numbers

AMS-IX

Peak traffic

9 Terabit per second
can be compared to the
simultaneous streaming of
1,800,000 HD videos

9.4
Tbps



Connected networks



Internet Data volume

Total volume



↑ +35%
35% more than 2019

Monthly average

1.9 EB

Total Capacity



100G active ports



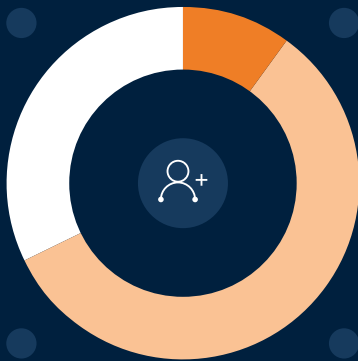
↑ +9%
9% more than 2019

Number of POPs



In Metro Amsterdam

New Customers



10%
Netherlands

58%
Europe (excl. NL)

32%
Outside Europe

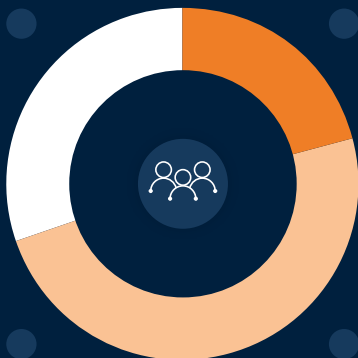
Connection Method

34%
Direct

66%
via Reseller



Total Customers



21%
Netherlands

49%
Europe (excl. NL)

30%
Outside Europe

2020
29 Customers

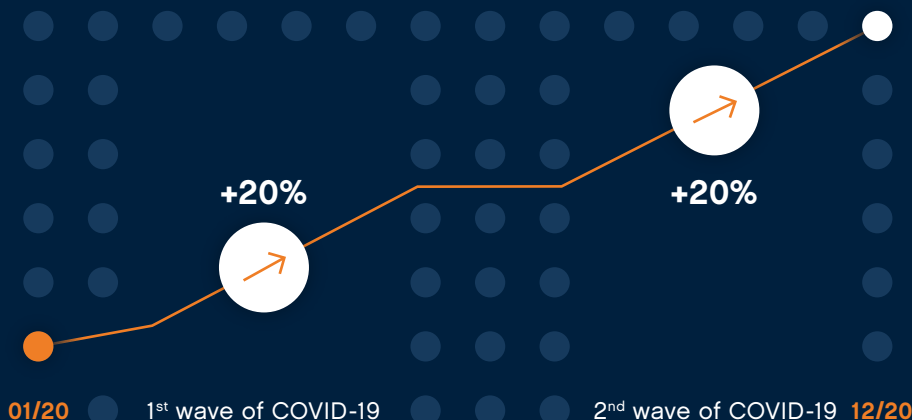


**EasyAccess
Customers**

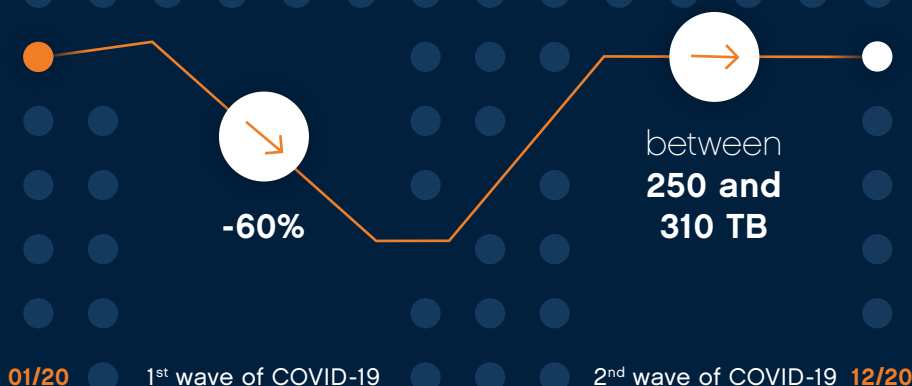
2019 16 Customers

+80%

Daily volume of internet data over the year



Daily volume of mobile GRX data over the year





Iris Vonk
Chief Financial Officer

Word from the CFO

CFO Iris Vonk attended to the finances of AMS-IX in 2020. She has captured her experiences and insights from the year in a few financial statements.

“Despite the pandemic and an uncertain economic outlook, we closed 2020 with a healthy result after tax of EUR 4.5 million (2019: EUR 1.1 million). Gross revenue increased by EUR 1.8 million (9%) to EUR 21.0 million. The growth is primarily driven from the public peering business, with the total number of 100GE ports increasing by 30% to 329. The total number of connected parties (ASNs) increased from 1,048 to 1,072 at the end of 2020. Gross margin declined slightly to 88.5% (2019: 89.6%) following additional power costs incurred at data centres.

Personnel costs increased by 6% (EUR 0.4 million) to EUR 7.2 million. This increase is mainly due to

the implementation of our new CRM and ERP tooling, requiring additional support from temporary outsourced personnel.

AMS-IX's number of employees at the end of 2020 declined to 59.1 full-time equivalent staff (2019: 61.5). This is in part driven by delays encountered in hiring technical and software development staff.

In 2020, total investments in fixed assets amounted to EUR 1.2 million (2019: EUR 1.9 million) - mainly comprised of switches.

The depreciation cost amounted to EUR 4.0 million, a decrease of EUR 1.3 million compared to 2019.

The decrease is driven by fully depreciated equipment from 2015 (investments in 2015: EUR 5.5 million), which was depreciated in 5 years.

Other operating expenses declined by EUR 0.5 million following reduced spend on marketing and travel as a result of COVID-19 related travel restrictions in 2020.

Financial income in 2020 includes interest paid on financial lease contracts, bank fees and exchange rate gains.

As per December 31, 2020 we have accounted for a Deferred Tax Asset of EUR 0.2 million, resulting from losses incurred by our subsidiary AMS-IX USA Inc. The subsidiary was dissolved as per December 31, 2020 and Management believes compensation for tax purposes of part of the losses is likely.”

● **Iris Vonk**
Chief Financial Officer



Company balance sheet

As at 31 December (x Euro, after result appropriation)

Assets	2020	2019
Non-current assets		
Fixed assets	5.634.658	8.638.636
Financial assets	203.779	-
	5.838.437	8.638.636
Current assets		
Accounts receivable	1.180.434	1.373.843
Taxes receivable	17.751	2.808
Other receivables	1.020.026	430.398
Accrued income	1.787.353	1.491.074
Cash and cash equivalents	7.638.450	2.328.695
	11.644.014	5.626.818
Total Assets	17.482.451	14.265.454



Equity and liabilities

As at 31 December (x Euro, after result appropriation)

	2020	2019
Equity		
Share capital	41.500	41.500
Share premium	385.779	385.779
Legal reserves	-	482.940-
Other reserves	9.569.905	10.052.845
Retained earnings	4.498.602	-
	14.495.786	9.997.184
Provisions	-	81.123
Non-current liabilities	-	51.968
	14.495.786	10.130.275
Current liabilities		
Financial lease obligations	64.996	1.279.952
Trade payables	1.495.738	1.276.793
Taxes and social premiums	430.524-	316.762
Other payables	1.856.455	1.261.672
	2.986.665	4.135.179
Total Equity and liabilities	17.482.451	14.265.454



Company Income statement

	2020	2019
Revenue	21.052.279	19.232.235
External operating costs	2.418.615-	1.995.758-
Gross Margin	18.633.664	17.236.477
Other operating costs		
Personnel costs	7.243.419	6.834.351
Depreciation of tangible fixed assets	3.961.976	5.212.026
Other operating expenses	3.178.160	3.660.081
Total Other operating costs	14.383.555	15.706.458
Operating result	4.250.109	1.530.019
Financial income and expense	2.776	206.530-
Result before tax	4.252.885	1.323.489
Income tax expense	203.779	318.872-
Share in results of subsidiaries and participating interests	41.938	137.395
Result after tax	4.498.602	1.142.012



Report of the Independent auditor

**To: Stakeholders of Amsterdam
Internet Exchange B.V.**

Opinion

The Summary of Accounts 2020 of Amsterdam Internet Exchange B.V., based in Amsterdam is derived from the audited financial statements 2020 of Amsterdam Internet Exchange B.V. In our opinion the accompanying Summary of Accounts 2020 are consistent, in all material respects, with the audited financial statements 2020 of Amsterdam Internet Exchange B.V. on the basis described on page 31 to page 33.

The Summary of Accounts 2020 comprise of:

- Company Balance Sheet
- Equity and liabilities
- Company Income Statement

Summary of Accounts

The summary of Accounts do not contain all the disclosures required

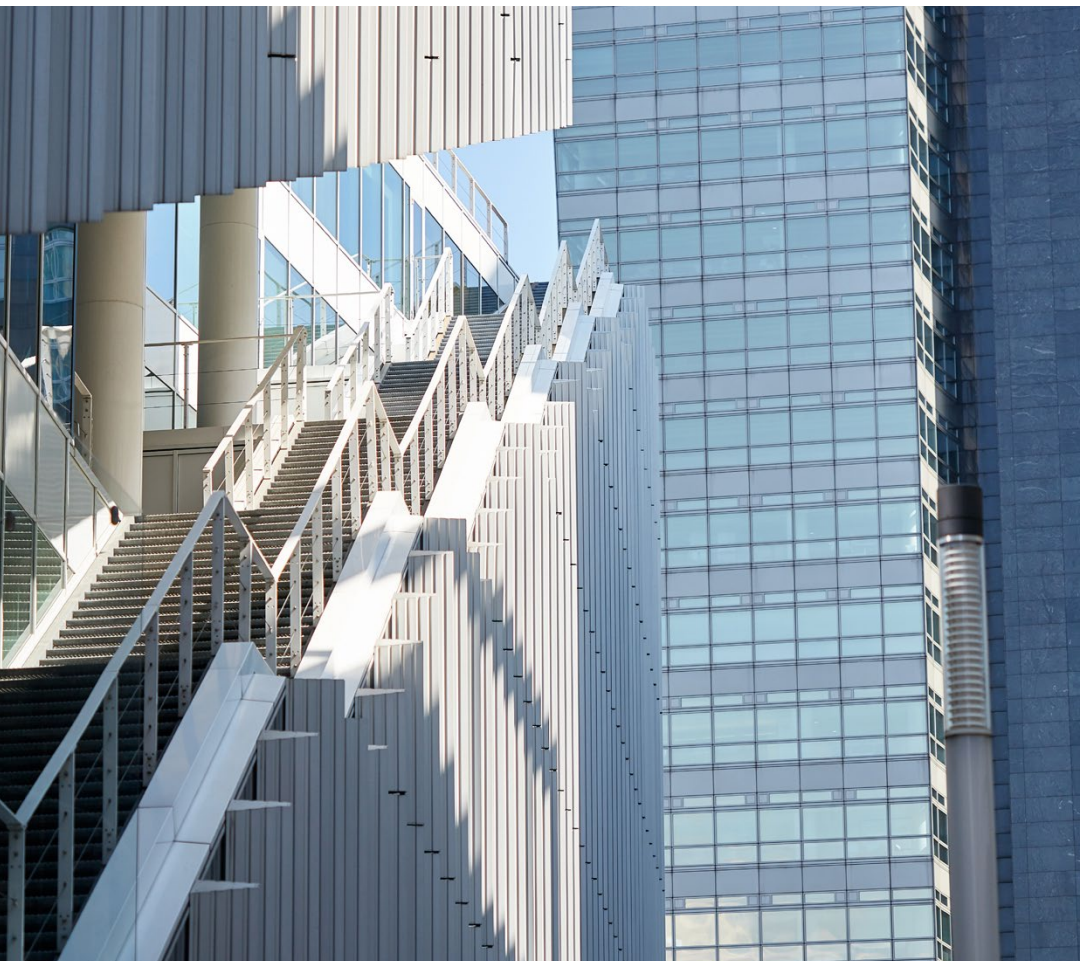
by Part 9 of Book 2 of the Dutch Civil Code. Reading the Summary of Accounts and our report thereon, therefore, is not a substitute for reading the audited financial statements of Amsterdam Internet Exchange B.V. and our auditor's report thereon. The Summary of Accounts and the audited financial statements do not reflect the effects of events that occurred subsequent to the date of our auditor's report on those financial statements of May 11th, 2021.

The audited financial statements and our auditor's report thereon

We expressed an unmodified audit opinion on the audited financial statements 2020 of Amsterdam Internet Exchange B.V. in our auditor's report of May 11th, 2021.

Management's Responsibility

Management is responsible for the preparation and fair presentation of the Summary of Accounts in accordance with



the applied criteria. The board is responsible for overseeing the company's financial reporting process.

Our responsibilities

Our responsibility is to express an opinion on whether summary financial statements are consistent, in all material respects, with the audited financial statements based on our procedures, which we conducted

in accordance with Dutch law, including the Dutch Standard 810 'Opdrachten om te rapporteren betreffende samengevatte financiële overzichten' (Engagements to report on summary financial statements).

Utrecht, May 11th, 2021
The Audit Generation B.V.

● Signed by:
A.M. van Diermen RA

2020

in pictures

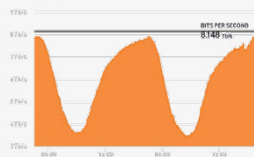


11 March

WHO calls the COVID-19 outbreak a Pandemic

All over the world, governments start to implement lockdown measures to contain the spread of the virus.

TOTAL DAILY



PEAK IN	PEAK OUT
8.148 Tbit/s	8.125 Tbit/s
AVERAGE IN	AVERAGE OUT
6.075 Tbit/s	6.071 Tbit/s
CURRENT IN	CURRENT OUT
8.148 Tbit/s	8.124 Tbit/s

31 March

8Tbit/s peak traffic in Amsterdam

Due to the containment measures of governments all over the world, people were forced to work from home and stay indoors. As a result, Internet traffic on all AMS-IX exchanges skyrocketed.



27 January

IX-API version 1 goes live!

IX-API is an open community API, designed and developed by the three leading global Internet Exchanges (IXs): AMS-IX, DE-CIX and LINX. The API provides an interface for provisioning key services at all three exchanges.



21 February

Digital Ocean Meetup

During the last week of February Digital Ocean hosted one of their meetups at the AMS-IX offices. It turned out to be one of the last face-to-face events of the year.



27 May

AMS-IX organises the AMS-IX Talks webinar

MORE-IP had to be cancelled due to the pandemic, so AMS-IX hosted the AMS-IX Talks webinar instead. Peter van Burgel, Henk Steenman and Tim Vriend gave the community an update on all projects and activities at AMS-IX.

KevlinX

30 September

KevlinX and AMS-IX announce the start of their partnership to deploy an Internet Exchange in the KevlinX data centre in Brussels

KevlinX' Brussels Data Centre campus will be ready for service at the end of Q4 2021.



6 October

DE-CIX, AMS-IX and LINX announce the next phase of IX-API

IX-API v2 will include cloud connection capabilities, private VLAN and closed user groups. AMS-IX will enable these new functionalities in 2021.



October

Start of the second wave of the pandemic.

AMS-IX implements a 'work from home' policy.



25 November

AMS-IX adds Microsoft Azure Peering (MAPS) to its Cloud portfolio

MAPS is a layer 2 networking solution specifically designed for enterprises that want high-quality and cost-effective connectivity to Microsoft cloud services such as Azure and Microsoft 365.



11 December

New linear price reductions for 100GE ports in Amsterdam

Customers will experience a price reduction that increases with every extra 100GE port they take. The new prices are offered on condition of a 24-month minimum commitment.



9 Tbit/s peak traffic in Amsterdam

The new wave of COVID-19 counter-measures fuelled a second surge in Internet traffic. In combination with worsening weather this resulted in another milestone traffic peak in Amsterdam.



AMS-IX and Telecom Egypt sign a strategic partnership to build an Internet Exchange (EG-IX) in Cairo

The new exchange will be situated inside Telecom Egypt's largest Certified Tier III international data centre facility within the Smart Village in west Cairo.



AMS-IX launches AMS-IX.me, a new community portal for new AMS-IX customers and members in Amsterdam

The new portal will make it even easier to connect to AMS-IX and will significantly improve the quality of our service.



Mike Baron
Senior Director
Sales & Marketing

Word from our

Commercial Department

In 2020, our Commercial team invested time and energy in making AMS-IX's strategic priorities, based on the pillars innovate, optimise and grow, as concrete as possible.

Mike Baron, Senior Director Sales & Marketing, explains what has been achieved in 2020 and how AMS-IX strategic priorities will remain fundamental to the company objectives in 2021 and beyond.

"Looking at the results of our sales, business development, products, services, marketing and communications teams we've seen some above-budget turnover growth and a small increase in the number of customers.

We achieved great results around IX-as-a-Service: an integrated solution for organisations that want to start up their own Internet Exchange. AMS-IX delivers the required hardware, software platform, expertise, and support. We've performed on target with six new international locations (in Tashkent Uzbekistan, in Cairo Egypt, with our partner Telecom Egypt, and in Hyderabad, Kolkata, Nodia and Chennai in India). More news of these will be available soon.

AMS-IX has also been sharing experience and expertise in other ways. For example, we have signed an MoU (Memorandum of Understanding) with KevlinX to build an Internet Exchange at their Data Centre Campus in Brussels. This will enable KevlinX customers to peer and interconnect through AMS-IX. Our commercial and technical teams' coordinated efforts also resulted in successfully enabling our New Microsoft Azure Peering Service

(MAPS). Unfortunately, we didn't achieve our targets on EasyAccess, primarily due to lower customer investments in 2020. EasyAccess extends the reach of connecting to AMS-IX, enabling connectivity outside of the Amsterdam Metro region. With regard to capacity, we've seen vast growth, largely driven by the need for bandwidth as a result of COVID-related measures.

Digital Transformation

AMS-IX is currently undergoing an extensive digital transformation. What do I mean by 'Digital Transformation'? Basically, it's about IT being implemented and adopted throughout the organisation and used to drive business. That's something different to digitization, which simply refers to processes automated by IT technology, working as an enabler.

Companies, organisations or even entire countries can go through this type of transformation, using digital technology and approaches to manage and optimise processes. In our case, this is helping us develop smarter, better, more efficient products and services. We're moving to customer-centric ways of thinking and acting based on insights, and thinking about



customers in new and different ways. Instead of thinking in terms of commerce and transactional sales, we are adopting more consultative, insight-based selling.

With this in mind we'll be taking care of continuous improvement and new features by adopting an agile way of working, in a way that suits AMS-IX, aligning technical, sales and organisational activities. In this way, we aim to make our customers, and their customers, successful in their own digital transformation.

Community collaboration

The digital transformation and all of the developments related to COVID-19 have accelerated change in how AMS-IX can engage with its community. We are undertaking a wide range of activities to adapt to the new reality so that we can continue to serve, engage and develop our community.

We started the year with several goals: grow the internet exchange in Amsterdam, expand our international footprint, and enter new markets with new and existing products and services to generate new revenue streams. All of the uncertainty in 2020 affected these plans. A number of

● “Our ways of working – and the Internet itself – are built around **communication, equality and community.**”

– mainly smaller – customers put their interconnectivity investments on hold, which meant growth was limited. Commercial interconnection between private networks also resulted in a number of high-volume downgrades. Interestingly, annual churn was largely the result of small indirect customers. On the other hand, many existing customers upgraded significantly in order to handle 2020's vast traffic growth requirements.

- **“We’ve performed on target with six new international locations** in Tashkent Uzbekistan, in Cairo Egypt and in Hyderabad, Kolkata, Nodia and Chennai in India.”

Our ways of working - and the Internet itself - are built around communication, equality and community. These aspects are very strong in the peering community, where everyone knows each other and face-to-face meetings are vital. Events are AMS-IX’s main knowledge exchange and contact moment with our community. This obviously presented a major challenge in 2020. The entire sector had to get used to a different way of communicating and conducting transactions. In turn, this also affected resourcing in the commercial team. I’d like to make clear that everyone did a great job coping with the effects of COVID in 2020.

Developing new revenue streams and products while going through a digital transformation resulted in some resource capacity challenges. Developing a new platform kept a large part of our commercial team occupied throughout the year. We also worked on our own CRM tooling to integrate with customer self-service, automated provisioning and billing. We are doing this to improve our effectiveness and efficiency, in order to better serve our community.

Continuing transformation

Our ongoing digital transformation drives the execution of our long-term strategy. Last year also saw the creation of a new team dedicated to optimising products and services. We also started developing activities to strengthen our online presence, for example through webinars, to keep the engagement with our community.

Plans for 2021 and beyond are based on continuation of our digital transformation as well as digital transformation among customers. This brings many new opportunities - but to make the most of these it is vital that we have a very clear picture

of AMS-IX's role in an increasingly digital world. We have spent the last 27 years building the Internet, and we are convinced that AMS-IX can play a larger role in the new digital world, beyond Internet exchanges and expanding into, for example, data and knowledge exchange platforms. We can leverage our experience to build platforms based in openness, neutrality, transparency, safety, and cooperation with a community of partners, customers and other stakeholders. This will help us develop new approaches, where we continue to facilitate exchange in an open and neutral way.

Of course, the Internet was never intended to facilitate today's digital world, which is why we see so many issues with privacy and data security, for example. We do see solutions, however, in the shape of digital exchange-based new platforms, using the technical and organisational experience we have developed in the area of interconnectivity. We've validated several concepts in this area.





AMS-IX Commercial team during the 2020 kick-off (January 2020)

Key company objectives for 2021 and beyond

AMS-IX has seen many exciting changes in recent years. The arrival of a new management team in 2019 and the recent launch of an updated long-term strategy give AMS-IX clear focus and ambition. Today, AMS-IX wants to be the leading internet exchange in terms of size and best in class services – this is currently the main focus of my department and myself. We want to increase the value AMS-IX brings to its community in Amsterdam and international communities. We are working hard on making the customer and community central to everything we do. Our new international ambition is to grow with 25 selected locations worldwide over the course of two years. We are in the lead when it comes to adding value in places we have chosen ourselves. We also want to be the most valued platform for communities that interconnect and this goal is closely linked to our innovation activities, where we also collaborate with our community.

For 2021 and beyond, we don't expect traffic to reduce and I am convinced we will keep working from home more

than in the past – at AMS-IX we've now proven that we can do this very successfully! Having said that - we miss the personal and social interaction with our community and we look forward to reconnecting in person as soon as life gets back to normal."

● Mike Baron

Senior Director Sales & Marketing



Showing off our
Home
Offices





Mike



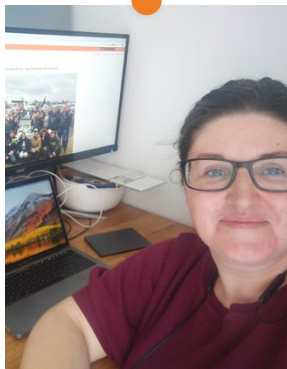
Emrah



Eric



Petra



Aleksandra



Natalja



Eizetha



Steven



Bran



Tim Vriend
Manager Delivery
and Operations

Word from our

Manager Delivery & Operations

Last year, the AMS-IX technical department had quite a hectic journey. The roadmap at the beginning of the year was altered significantly due to changing circumstances. Nevertheless, in spite of the increased workload, the technical department achieved a great deal in 2020.

Tim Vriend, Manager Delivery & Operations brings you up to speed.

“At the start of the year, we already had made some small changes to our initial management and maintenance planning. In the previous years, we migrated many of our customers to SLX switches. But due to changing priorities in the vendor’s development roadmap, we had to start looking for a new vendor that would enable us to manage growth on the platform. At the same time, we would need them to enable us to support future

technological developments. Our technical department is currently running a proof of concept with a new vendor, which – if everything goes well - we will onboard in the first half of 2021. In the short run and during 2021, we will use our current vendor to manage capacity growth.

In 2020 we finalized several hardware upgrades to add capacity to several of our Pop locations in Amsterdam.

- “In 2020 we expanded our backbone capacity with **over 7.4 Terabit, up 27% compared to 2019.**”

We also migrated our resellers to SLX switches for higher power efficiency and port capacity. Due to the pandemic and severe restrictions imposed by the government and data centres, we had to reschedule some of our projects, such as the ‘Core Move’, which is now set to happen before the summer of 2021.

The pandemic had a significant effect on the work of our technical department. Many of our members and customers upgraded their port capacity. That significantly affected our workload. All locations in the metro area have been upgraded with extra 100 Gigabit ports. Over the full year 2020, the technical department achieved expansion of customer port capacity with more than 8.1 Terabit, up 20% compared to 2019 (in the ‘normal’ year 2019 we added 3.5 Terabit of customer port capacity). Furthermore, we upgraded all our locations with additional backbone capacity. In 2020 we expanded our backbone capacity with over

7.4 Terabit, up 27% compared to 2019 (in 2019 we expanded with 2.1 Terabit of Backbone capacity).

Next to management and maintenance of the platform, the technical department also invested time and effort in our international partners’ platforms, particularly the IXaaS product. Batelco’s IXaaS deployment in Manama was growing fast and we introduced a new 100GE Switch to manage the growth in that region. MN-IX (powered by AMS-IX), which has now been operational for 1.5 years noted a traffic peak of over 200 Gbps, effectively becoming the fastest growing internet exchange in the Middle East.

Furthermore, AMS-IX expanded its IXaaS program. AMS-IX signed a contract with SNS Group to deploy IXaaS in Tashkent Uzbekistan. The implementation of the exchange experienced some delays, but the exchange is now set to go live in the first half of 2021. Late in 2020

AMS-IX signed a contract with Telecom Egypt to deploy an exchange in Cairo. And finally, we are about to expand to multiple locations in India.

And last of all, we saw progress on a number of innovation projects with external partners, particularly the 2StiC program and the IX-API program. The 2Stic program is an initiative aimed at experimenting with new kinds of connectivity to enable safe, stable and secure connections. The program for setting up a test

bed for non-IP traffic is well underway. The first paper describing the 2StiC national tested, the technologies we use, and our ideas, has been published. The IX-API program is a shared initiative from AMS-IX, DE-CIX and LINX to build a single standard that enables networks to connect to all three exchanges. Currently we are working on the first implementations of IX-API with our partners.”

● **Tim Vriend**

Manager Delivery and Operations



A lifetime of AMS-IX with

Henk Steenman

Henk Steenman

Retired CTO
and founder



All good things must come to an end. Henk Steenman, our CTO and one of the founding fathers of AMS-IX, retired on January 1st, 2021. Henk has worked in the IX and peering community for decades. How does he look back on his time with AMS-IX?

“Before I started working at AMS-IX, I switched jobs regularly. Every four to five years, always taking on different roles and responsibilities. For me, working in the same place for a long time was definitely not normal. Which brings me to why I joined AMS-IX in the first place...

I first came into contact with AMS-IX when I was working at SARA in the early 90s. SARA hosted an interconnection hub for scientific networks on behalf of SURFnet. This was connected to a similar node at Nikhef, to which a number of commercial networks were already linked. The exchange, in its earliest phase, already played a very important role in the functioning of the Internet.

After I left SARA, I became linked to the exchange again when I began working for AT&T. As part of an Internet architecture expertise centre, I was aware of the value an exchange could bring to the company and the community. Therefore, I became actively involved in securing management and technical stability for the platform. I took part in the foundation of the association and served as a board member for two terms, from 1997 till 2001. I think not-for-profit organisations that serve a community or communal goal are very important to the industry. This may even be one of the reasons why I dedicated the greater part of my career to AMS-IX.

After my second term (and an interval of a few months) Job Witteman, at that time CEO of the newly formed AMS-IX, asked me to become CTO of AMS-IX. Technical management of the platform had been handed over to the company and they needed someone to oversee those activities. I said “yes” to the job, and some of my best AT&T colleagues – Steven Bakker, Ariën Vijn and Romeo Zwart – came along with me.

If you were to ask me what the high point of my career was, I think these first few years as CTO at AMS-IX would qualify. We were a fantastic, high-performing team of excellent engineers. And we had a monumental mission: to stabilize the exchange, which saw traffic growth of 300 per cent each year. We had to put in long hours to get everything working and had to work with the latest technology available, which always comes with problems. We needed to be very pragmatic and not be afraid to make our hands dirty. It was a very demanding job and I loved it. You do your best work when you are under pressure.

● **“We had a monumental mission:** to stabilize the exchange, which saw traffic growth of 300 per cent every year.”

I have a nice anecdote about that time, which I recall vividly. We had just upgraded the exchange with the latest switches from Foundry - the vendor capable of delivering switches with the highest throughput at that time. However, we experienced numerous problems. Outages would occur all the time and we had to repeatedly contact the Foundry engineers to flag and fix problems.



At a certain point, when we had just worked for more than 24 hours on end, one of the Foundry representatives told us that their CEO was in Paris that week and we had the opportunity to speak to him about our experiences with their product. Although I was exhausted, I did not want to miss this

chance. So, I went home to take a shower, flew to Paris, interrupted his dinner and explained to him which role AMS-IX plays in the Internet and shared our experiences with his product. It was greatly appreciated. From that day on, we always had full priority and commitment from Foundry to fix any problems we might have.

At that time, we also experimented with new technologies a great deal and this resulted in many innovations, such as the use of photonic cross connects or MPLS. In a way, we had to. We couldn't keep working 24 hours on end forever, automating and experimenting was simply the best way forward. In those days we also started the practice of full transparency. We told the community about every problem we encountered and how we fixed it - and this was greatly appreciated.

The job did not stay this way. At a certain point in time, traffic growth was less high and the pressure on the tech team was relieved to some extent. My role changed; I started to represent AMS-IX to the outside world. I visited RIPE meetings, industry events, vendors and customers. Mainly in the Netherlands at first,





but later also abroad. I also started to teach about interconnection at that time. In the press, but also at universities such as the UvA (University of Amsterdam), the University of Twente and the Eindhoven University of Technology.

AMS-IX also became involved in serving the Internet community in standardisation initiatives. AMS-IX became active in the IETF, and helped very significantly with the development of the 100GE standard in the IEEE. And we still do, this time for example through our work for IX-API.

I also enjoyed this second period of my AMS-IX career very much, especially the interacting with different cultures. Working abroad, you meet a lot of different people, which gives you totally new perspectives on other countries. The AMS-IX ventures in Kenia, for example, were a big adventure for me and I greatly appreciate the relationships I built with our partners there.

And now I'm retiring. Looking back at what has been achieved, I think we mainly showed the success of public peering.



- “I would like to thank everyone who has ever worked at AMS-IX.
You made AMS-IX what it is today.”



AMS-IX, from its early beginnings, has always played a pivotal role in the functioning of the Internet, but in those early days Internet itself did not play the role in society that it has right now. Society basically cannot function without Internet. It is interesting to consider the question what we would have done to fight COVID if we didn't have Internet and many people could not have worked from home.

AMS-IX grew with the Internet, making public peering a commodity. Today, many organisations offer a form of peering. You could argue that the

role of the exchange is diminishing. On the other hand, however, I think the general idea behind public peering – direct interconnection is always better and more cost-effective than interconnection via an IP transit middleman – will endure.

Last, I would like to thank everyone who has ever worked at AMS-IX. You made AMS-IX what it is today."

Henk Steenman
Retired CTO and founder

AMS-IX

around the world

1 Amsterdam

Connected
networks 885
Peak traffic 9.4 Tbps

2 Bay Area

Connected
networks 27
Peak traffic 36 Gbps

3 Chicago

Connected
networks 26
Peak traffic 155 Gbps

4 Caribbean

Connected
networks 12
Peak traffic 28 Gbps

5 Hong Kong

Connected
networks 59
Peak traffic 78 Gbps

6 Mumbai

Connected
networks 47
Peak traffic 78 Gbps

7 Manama

Connected
networks 15
Peak traffic 208 Gbps







Petra Wensing
Marketing &
Communications Manager

Word from Marketing & Communications

In 2020 due to the pandemic all the different departments were extremely busy and had to do things differently. This was also the case for the Marketing and Communications department. Petra Wensing, Marketing & Communications Manager explains.

“In 2020, we translated our strategy into actions that would help our department realize AMS-IX’s goals. Our mission and vision (see box on page 68) were updated. We involved employees in defining our core values, which are essential to our internal communications. “Connecting you to everyone and everything”, a new tagline for a wide range of communications tools, was derived from the AMS-IXs mission statement “To facilitate open and safe inter-connection between everyone and everything”. This reflects the changing role that AMS-IX plays in the Internet.

AMS-IX has always been primarily involved in peering. However, pressure on transit prices, new technology and market developments are making us rethink our position. We have been focusing on new services and products for new target groups with different needs, positioning ourselves as an interconnection platform that enables anyone to connect and exchange data.

Widening our scope, focusing on innovation and creating economies of scale, means introducing new concepts, such as IX-as-a-Service and Cloud services. Besides facilities, we’re making sure people see we’re offering services and expertise.

Major impact

The pandemic meant we had to review our marketing activities and planning for 2020. How could we keep partners and customers informed if you can't meet physically? How could we achieve our goals in a different way? How could we keep developing our main themes, such as enhancing community engagement and increasingly positioning ourselves as a centre of expertise?

Communication shifted from the physical to the digital world. In addition to our existing newsletters and social media activities, we focused more strongly on webinars, panel discussions, and stimulating the management

team to take part in these. Our CEO, for example took part in numerous webinars. But also other people from our organisation joint several sessions.

COVID-19 had a major impact on international events, many of which are sponsored and organised by AMS-IX. The peering and inter-connection world strongly relies on personal relationships and face-to-face contacts. This year, our own MORE-IP event went virtual, which required a new way of thinking. How to take such an event online? How do we make sure information, presentations and meetings remain engaging and interesting? We had to find new tools and learn to work with them.

- **“Last year, we focused on keeping employees informed and engaged, for which we implemented a wide range of actions.”**



A person with a backpack is walking away from the camera on a wooden pier that extends into a body of water. The sun is low on the horizon, creating a warm, golden glow across the sky and water. The person's shadow is cast on the pier. The water has small ripples, and the distant shoreline is visible under the sunset sky.

Our Mission

To facilitate open and safe interconnection between everyone and anything.

Our Vision

It is our vision to build interconnected communities next to or within the current internet that are reliable, safe and open to everyone, agnostic to today's technological flaws and challenges.

Employees were trained in effective online presentation and we made sure items such as professional backgrounds and templates were available. We also focused on getting people to strategically use social media to increase reach. We accelerated and increased our online presence to keep in touch with relations and undertook a number of activities with partners such as webinars. We also facilitated a Digital Ocean meetup, as one of many actions to support our community which was one of the last physical meetings.

COVID-19 meant millions of people were working from home. Internet traffic went up with 35% in 2020. Every day, journalists asked us whether the Internet would be able to handle all this traffic. Fortunately, we were able to reassure them: we could handle three times the volume.

Last year, we also focused on keeping employees informed and engaged, for which we implemented a wide range of actions. From creating an intranet page, providing contact lists, offering teams a podium for sharing

results or workplace photos, and organising quizzes and online Christmas celebrations to our CEO personally dropping off Christmas hampers at every employee's home.

Important player in the digital economy

As the world's largest Internet exchange we have been a major player for over 25 years. Our aim is to be recognized as a thought leader and position ourselves clearly in several areas. As long-standing colleagues left the company, we will need to find new ways of achieving this recognition.

Over the past years AMS-IX has achieved a great deal through community building and face-to-face contact. Although we have expanded our digital activities, meeting each other remains incredibly important and we hope we can all see each other in person again soon."

● Petra Wensing

Marketing & Communications
Manager





Word from

Human Resources



Mona Moursy
HR Manager

Last year, the AMS-IX HR department introduced a new performance review method and found ways of dealing with the effects of COVID-19. Mona Moursy, HR Manager, shares some insights into last year's developments and what's expected for AMS-IX going forward.

"When I started at AMS-IX in mid-2019, a new way of conducting performance reviews was high on the agenda and in 2020 we made good progress on that dossier. We have now changed the way we organise performance reviews and hold quarterly check-ins. Moreover, in 2020 we started and completed the implementation of a new HR platform: INTUO. This platform encourages ongoing conversations between manager and employee. In part, these are past-focused conversations about goals that have been achieved. However, the platform also supports future-focused conversations. Employees now have the opportunity to indicate their ambitions and goals based on their job descriptions, but also with an eye on personal growth.

Another important part of INTUO is the fact that managers now can offer insights. Which projects will be key in the coming year? What are the emphases within

peoples' job descriptions? During the mid-year reviews, employees can also give their manager feedback. Direct colleagues, or people working together on a project, can also give each other feedback via the platform. The goal is, of course, that this feedback will facilitate personal development. The fact that INTUO is a digital platform has created process efficiencies and makes it easy to track past conversations and reviews.

Defining our core values

Last year AMS-IX set up a project team to redefine our core values. We didn't want to create these values from within an 'ivory tower', so we developed a system that truly involved all the employees of the company, using questionnaires, workshops and brainstorm sessions. We now have defined three core values, which will serve as a guiding light for internal interactions and our relationship with all stakeholders.

AMS-IX

Core Values



Collaboration

We move forward as a single force: Team AMS-IX. We work together and with others to build communities and contribute to a better society.



Dedication

We are dedicated professionals who go the extra mile to deliver. We care, we believe, and we aim to achieve the best results.



Excellence

We are passionate about delivering quality. We set the highest standards and we take pride and joy in everything we do.

In 2020 we also focused on attracting new talent by improving on secondary employment conditions. We entered into a partnership with FISC free, which offers employees tax benefits on certain purchases.

Cooperation with the Works Council has been developed further last year. We spoke extensively and frankly with existing members and new members, as they took office, with excellent results.

Changes around COVID-19

The pandemic had a big impact on the organisation and naturally we took measures to contain the spread of the virus and at the same time continue day to day operations.

We reviewed our home-working policy and we introduced a coach for people having a hard time dealing with corona-related changes. And our marketing colleagues also organised numerous fun activities, such as weekly virtual get-togethers,

or sending small gifts. After every government press conference, CEO Peter explained what each new set of regulations would mean for AMS-IX and its employees. This was very much appreciated.

2021: a year of stabilization.

This year, we want to incorporate education and training into the HR platform and roll out the core values, fully embedding them in the organisation. We are also looking at whether employees are interested in taking short coaching courses, which will enable them to coach each other. People have been working with external coaches, but there have also been requests for internal coaches. This demand really comes from within the organisation.

Changes in the role of the Internet have also had an effect on HR. Privacy has been an increasingly important factor in recent years and there is more awareness of this, as well as more focus during audits. How do you handle employee and applicant data, for example? This requires clear policies for the administration and ongoing focus.

In 2021, we have also introduced a transparent system that shows employees how their salary will increase in the coming year and how it ties in with their performance review score. 2020 was, in essence, a year of building - from core values to fringe benefits. I see 2021 as a year of implementation and stabilization.”

● **Mona Moursy**
HR Manager

- **“In 2020 we started and completed the implementation of a new HR platform** which encourages ongoing conversations between manager and employee.”

Coordination
Bram Semeijn

Support
**Petra Wensing, Julia Lechien,
Henrica Kranendonk**

Copywriting
John Edwards, Bram Semeijn

Interviews and texts
**Peter van Burgel, Bart van der Sloot,
Iris Vonk, Tim Vriend, Henk Steenman,
Mike Baron, Petra Wensing, Mona Moursy**

Photography
**Michael Fischer, Rogier Bos,
Bart van der Putten**

Concept and design
**Studio Piraat,
The Hague, The Netherlands**

Print
**Drukkerij Van Deventer,
's-Gravenzande, The Netherlands**

© 2021 AMS-IX

AMS-IX
Frederiksplein 42
1017 XN Amsterdam
The Netherlands

info@ams-ix.net
T +31 (0)20 305 89 99
ams-ix.net

