



SHAPING SMARTER GRIDS FOR YOUR FUTURE

**Customer Service
Overview Paper:
Key Figures and
Trends in DSOs**

Foreword by E.DSO Chair Johan Mörnstam



Decarbonisation objectives are reshaping Europe's electricity landscape, and electricity distribution system operators (DSOs) are at the core of this transformation. With the EU's ambitious climate goals, DSOs are driving progress by allowing the integration of renewable energy into the system. Improving the way consumers interact with energy services is essential to enable this integration.

This paper highlights how DSOs are adapting to this evolving context by leveraging digitalisation, enhancing customer service, and investing in innovative technologies such as artificial intelligence. It also sheds light on the regulatory frameworks guiding these developments, emphasising how effective regulation can contribute to reducing complexity and enhancing efficiency across Europe.

Customer service is particularly central to this discussion. As our findings show, DSOs are shifting to digital channels – such as mobile apps, IVR, and chatbots – to meet rising consumer expectations while improving operational performance. These efforts align with global trends and reinforce the role of DSOs as key enablers of Europe's energy and digital futures.

As Europe seeks to strengthen its competitiveness and sustainability, this report offers actionable insights to inform policymaking and industry strategies. By working together, we can ensure a resilient, inclusive, and customer-focused energy future.

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1

Introduction

European Distribution System Operators (DSOs) are reshaping the landscape of customer service amid a period of unprecedented changes in our energy systems. Driven by rising expectations and the imperative to enhance operational efficiency, DSOs across the continent are adopting innovative service models and advanced digital solutions to improve their stakeholder engagement. This report explores how these operators are leveraging both traditional and modern techniques to deliver superior customer experiences in today's rapidly evolving electricity sector.

The analysis presented in this report is underpinned by robust data gathered from a representative sample of leading European DSOs. Participating companies include DTEK Grids, i-DE Redes Eléctricas Inteligentes, ORES, E-Distribución Redes Digitales, HEDNO, E-REDES, UFD Distribuidora de Electricidad, NIE Networks, Netz Niederösterreich, ESB Networks, E.ON Netz, and Fluvius. These organisations, operating under diverse regulatory frameworks and market conditions across Europe, provide a comprehensive snapshot of the current state of customer service within the industry.

Structured into eight distinct sections, the report begins with an analysis of the top trends that are currently influencing DSO customer service. It then moves on to examine client service practices in detail, juxtaposing traditional contact centres with emerging digital channels such as mobile apps and chatbots. Subsequent sections delve into the technological innovations in interactive voice response (IVR) systems and mobile solutions that are driving enhanced customer interactions, as well as an evaluation of key performance indicators like the Customer Satisfaction Index (CSI) and Net Promoter Score (NPS). The discussion further extends to the evolving policy and regulatory frameworks affecting the sector, before highlighting best practices through illustrative case studies and acknowledging the contributions of the DSOs that provided the data.

By synthesising these diverse insights and analysing the representative data, this report aims to serve as a strategic resource for both DSOs and policymakers. The findings and recommendations outlined herein are intended to guide the ongoing evolution of customer service practices, ensuring a resilient, customer-centric energy ecosystem that can meet the challenges of tomorrow.

2

Top Trends



The most popular metric for measuring the level of customer service is the Customer Satisfaction Index (CSI), used by all companies surveyed. This metric is applied to measure satisfaction across customer service channels as well as in core services (grid connection, smart meters, grid incidents). Only 30% of respondents¹ measure overall Net Promoter Score (NPS²) for their companies. The methodology involves asking customers to rate their satisfaction with a service provided. The overall index is calculated through a weighted average from surveys covering contact centres, branches, digital channels, and field services.



DSOs operate under different regulatory environments across Europe. Countries such as Spain and Ireland track up to seven metrics (primarily focusing on complaint responses, call/contact centre response times, and electricity recovery time), whereas Greece, Austria, and Ukraine track approximately 15 state-regulated metrics.



40% of DSOs do not operate offline customer service centres, and those that do, typically handle only about 5% of total requests. However, in countries like Ukraine and Ireland, this service channel handles up to 50% of consumer enquiries. Further development of online services is expected to eliminate the need for physical service centres.



Call centres remain the most widely used customer service channel, handling an average of about 40% of all customer requests. 70% of respondents outsource call centre services. Additionally, all companies actively use and develop IVR³ systems, which resolve up to 50% of contact centre issues.



The mobile app is the second popular channel, with 60% of respondents citing it as a main customer interaction channel, accounting for up to 40% of all customer requests. The most popular services include notification of power outages, online payments, and real-time electricity consumption data.



Chatbots in messengers are attracting attention from the market. For example, in some DSOs this service channel accounts for up to 50% of customer requests. The most popular services include notification of power outages, chat with an operator and service requests.



DSOs rely on outsourced IT services for flexibility in service development and efficient cost management. DSOs often outsource at least 50% of their IT team. Some companies have completely switched to IT outsourcing.



All DSOs surveyed are investing in smart meters, with companies in Austria, Italy, Spain, and Portugal achieving over 95% coverage. Only four of the surveyed DSOs have lower smart meter coverage (Ukraine, Greece, Belgium and Bulgaria), and all of them are actively investing in this area. Smart meters are not a trend, they are a necessity.



DSOs are investing in Research and Development (R&D) and Artificial Intelligence (AI), primarily in digital channels (chatbots, IVR, and virtual assistants) and customer behaviour analytics (call and comment analytics and document analysis). Innovation also focuses on speech and knowledge bots using AI technologies, field service management, power map solutions for better customer experience and lower operational expenses.

1 - Respondents refers to survey respondents. The companies surveyed are DTEK Grids, i-DE Redes Eléctricas Inteligentes, ORES, E-Distribución Redes Digitales, HEDNO, E-REDES, UFD Distribuidora de Electricidad, NIE Networks, Netz Niederösterreich, ESB Networks, E.ON Netz, and Fluvius. They are active in 10 European countries: Belgium, United Kingdom, Ireland, Lithuania, Ukraine, Greece, Austria, Spain, Portugal, Italy.

2 - **Net Promoter Score (NPS):** A metric that measures customer loyalty and satisfaction by asking customers how likely they are to recommend a company's products or services, typically on a scale of 0 to 10.

3 - **Interactive Voice Response (IVR):** An automated telephone technology that enables callers to interact with a system using voice commands or touch-tone inputs.

3

Client Service Practice

SERVICE CHANNELS

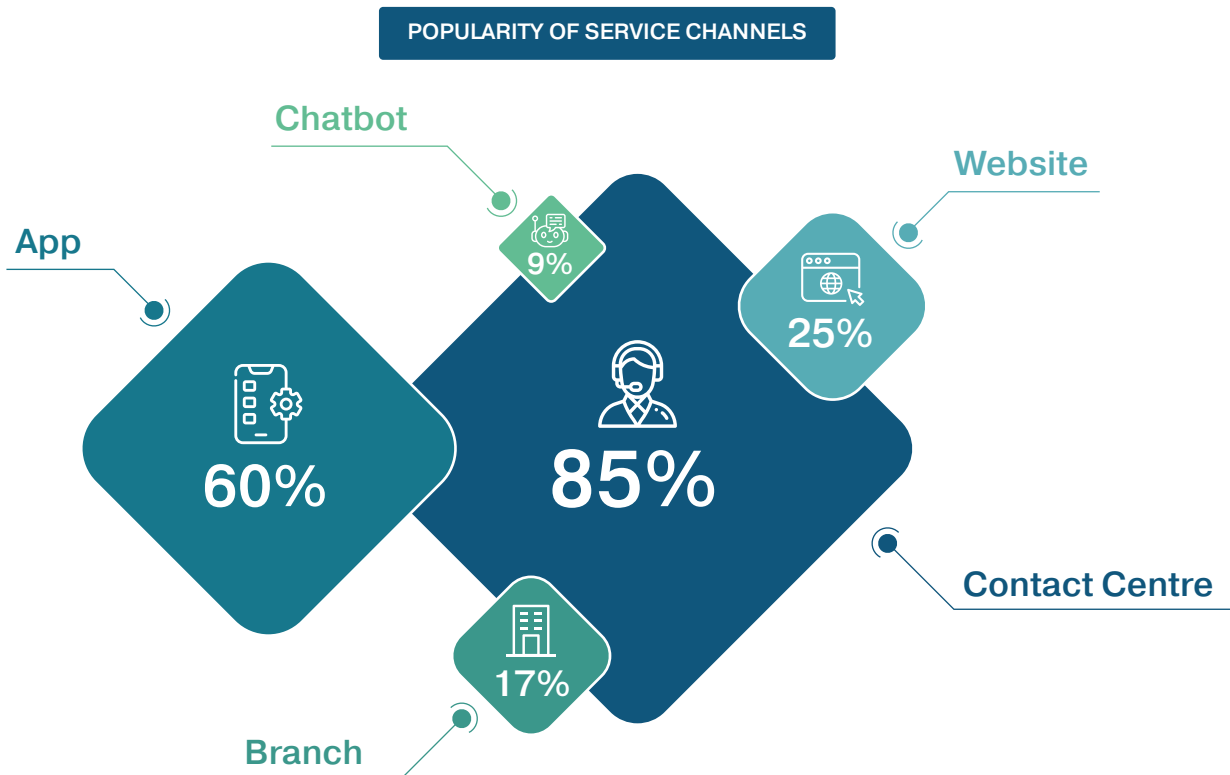
Trends and changes in customer service channels in the electricity distribution sector mirror those of other industries involving customer service functions. The most popular service channels include:

Contact centres: Used by 85% of DSOs, this remains the dominant customer service channel. There is a clear trend towards automation through IVR services, sometimes incorporating AI solutions.

Websites with personal accounts: Used by all surveyed operators, more than 30% of enquiries pass through this channel for 25% of respondents. Personal accounts offer functions such as electricity consumption analytics, service requests, online payments, and tariff modifications.

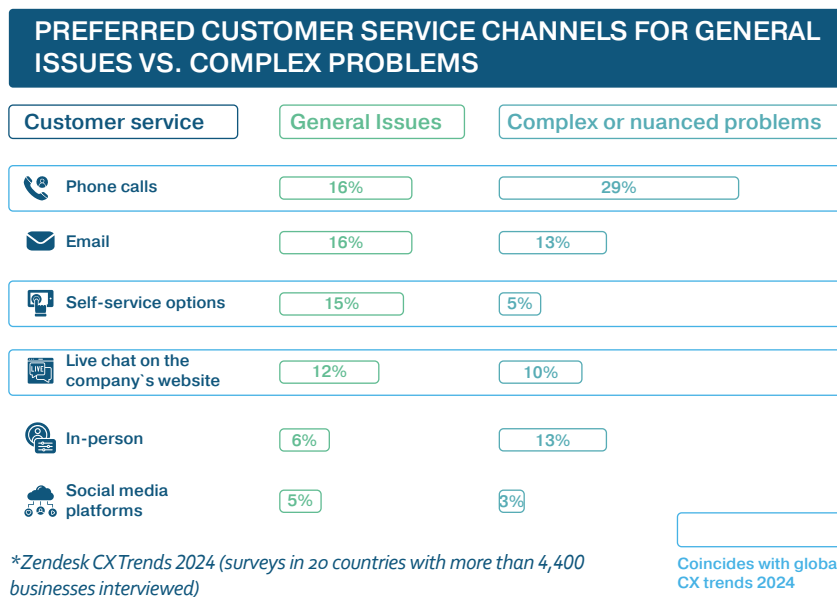
Mobile applications: Used by 60% of respondents, apps remain highly relevant, being the second most common service channel after contact centres.

Chatbots and external messengers: Offered by 65% of respondents through platforms such as Facebook Messenger and WhatsApp. Though not universally popular, this channel is gaining attention as a convenient option for responding to customer enquiries.



Traditional service channels (i.e. physical branches) are losing popularity as services migrate online. In the coming years, contact centres are likely to remain the most popular channel for resolving both simple and complex issues. In the future, automation through advanced IVR functionality will enable customers to handle all levels of enquiries without operator intervention.

This, in turn, will allow for more efficient cost management and the handling of a larger volume of calls without requiring additional contact centre operators. Attention should also be given to the growing popularity of self-service channels and chat rooms. As a result, the development of digital channels functionality (Apps, personal accounts, and chatbots) will remain a key focus for customer service enhancement. This area of development for DSOs is in line with such global Customer Experience (CX) trends as customer call handling, self-service services, and live chat with a company representative.



CONTACT CENTRE

The number of contact centre employees is determined by the number of customers and volume of requests handled. The level of automation also affects staffing needs. External factors such as power outages and equipment failures directly influence request volumes.

The average figure among the surveyed companies is 21,500 service points per 1 contact center employee, which is achieved by advanced IVR functionality that reduces the workload on the operator.

This indicator is driven by the advanced IVR functionality, which provides information on power outages and incidents while enabling customers to submit requests and track their status. This significantly reduces the workload for Call Centre employees. In the near future, agent-assist and one-desk solutions are expected to become the primary service concept, with call centres evolving into competence centres.

IVR DEVELOPMENTS

Currently, IVR enables companies to manage not only basic information on tariffs and cooperation terms but also to alleviate Contact Centre workloads by offering popular services. These include:

- Informing about planned power outages (used by 65% of respondents)
- Incident notifications (50% of respondents)
- Other self-service functions (metering data, reschedule technical visits, voicemail service for callback)



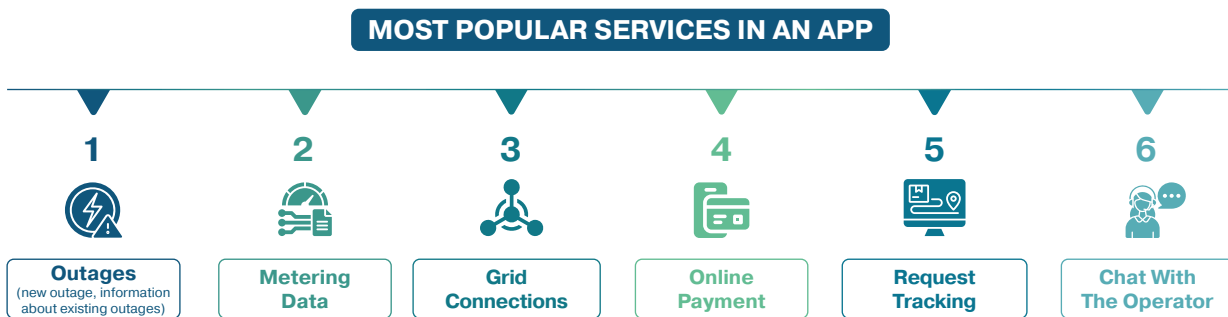
Advanced services being introduced include:

- Applications for electricity connections or capacity increases
- Priority service for vulnerable customers
- Redirecting communication to messengers

There is also a trend toward using IVR as a proactive communication channel. Outbound campaigns involve calls to customers for crisis communication during unplanned power outages or to promote new products or services. IVR has yet to reach its full potential within DSOs' service channel mix and is expected to continue its development including usage of AI technologies.

MOBILE APPLICATIONS

75% of the DSOs involved in this research have an App, meaning not all companies have developed this as a service channel. Nevertheless, Apps account for up to 40% of all customer inquiries. The development of Apps as service channels is set to continue, as it aligns with broader trends in service provision.



Apps remain a popular channel and adhere to prevailing functionality trends:

- Information on power outages (available in all company apps)
- Online payments (available in 80% of companies)
- Real-time electricity consumption data (available in 80% of respondents)
- Chat with the operators (available in 50% of respondents)

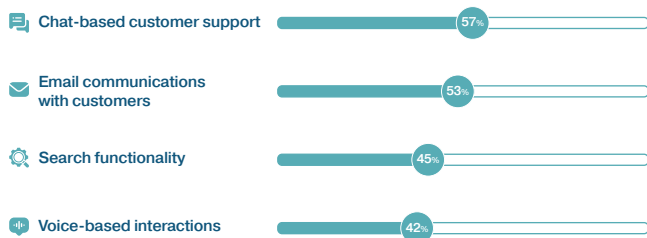
Some Apps also include advanced features such as:

- Multi-tariff pricing.
- EV charging point.
- Contract management.
- Opening and tracking of grid connection requests.
- Near real-time meter connection (reconnect power control switch).

CHATBOTS

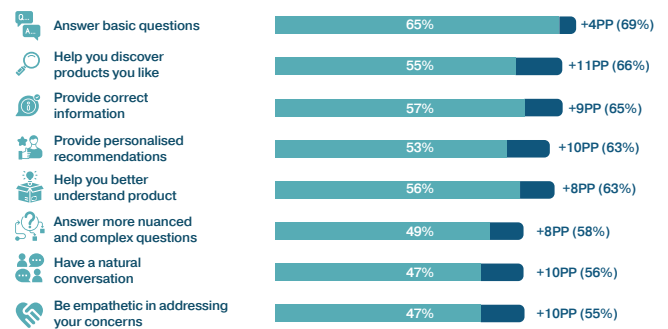
The demand for chatbot services will rapidly grow in the coming years. Consumers are increasingly expecting significant upgrades in chatbot functionality to resolve all their issues. DSOs are actively enhancing their chat services in line with changing expectations.

ASPECTS OF CUSTOMER-FACING TOUCHPOINTS CX LEADERS ANTICIPATE BEING HEAVILY INFLUENCED BY GENERATIVE AI IN THE NEXT TWO YEARS:



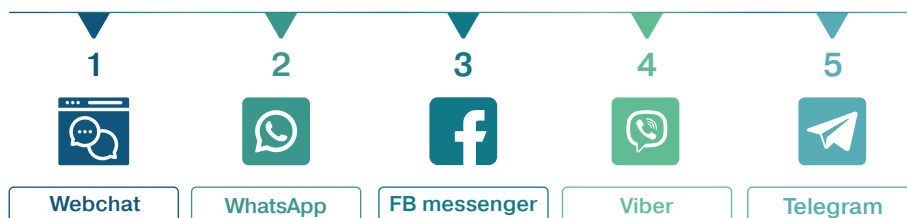
*Zendesk CX Trends 2024

CURRENT AND EXPECTED RATING OF BOT PERFORMANCE IN TYPICAL CX INTERACTIONS BY CONSUMERS



First, operators are improving their own chatbots on websites and personal accounts, with 80% of channel owners investing in these efforts. WhatsApp is the most popular external messenger for chatbot development, used by 60% of channel owners. Facebook Messenger follows with 40% penetration, while Viber holds a 20% share. Only Ukraine has a Telegram chatbot.

MOST POPULAR MESSENGERS IN CHATBOT



The functionalities align with broader digital trends. Information about power outages ranks first, followed by the ability to chat with an operator, and then service requests.

4

Innovation

Like other service companies, DSOs are investing in customer engagement to improve user experience and optimise operating costs. Many innovative solutions, already proven in other industries, are now being adopted by DSOs.

In response to current trends, DSOs are doubling and, in some cases, tripling their R&D budgets for digitalisation and process automation. Investments focus primarily on digital channel services, such as chatbots, IVR, and virtual assistants in Contact Centres, as well as customer behaviour analytics (including call and comment analytics and document analysis). There is wide attention to field service process automation which helps to build more efficient and client oriented workflow.

These developments indicate that DSOs are undergoing active digital transformation, not only in operational processes but also in customer interactions. More companies are recognising that their responsibility extends beyond the grid to the customers connected to it.

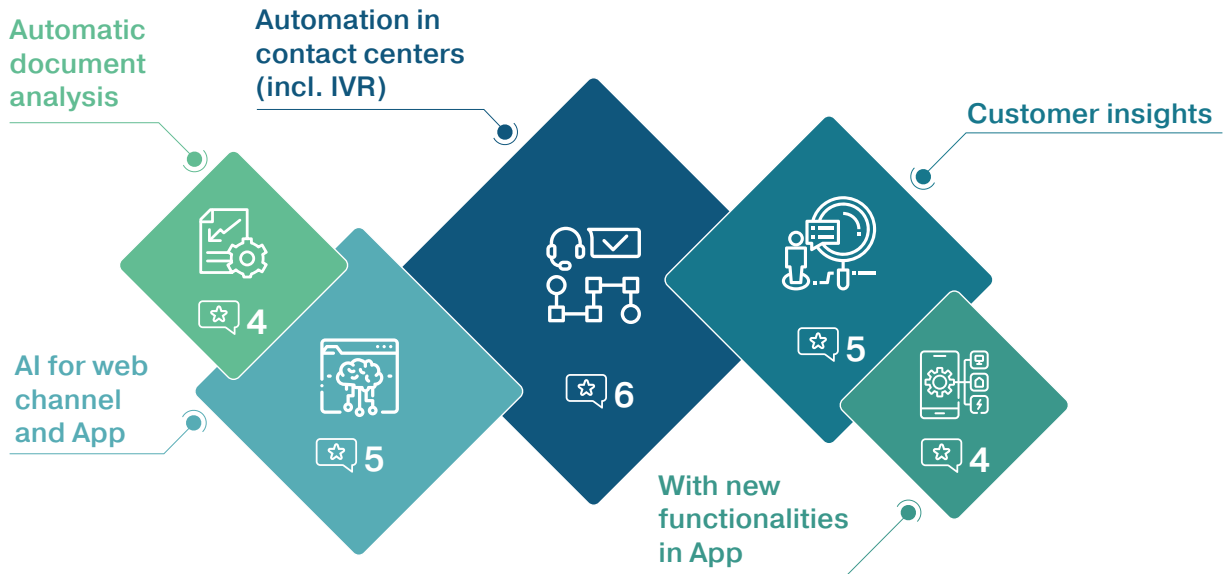
Innovations in other areas can also enhance customer service:

Speech and knowledge bots: Virtual assistants that synthesise natural language, provide voice responses, and accelerate information analysis for optimal solutions.

Field service management (FSM): Technicians can instantly share local information via mobile devices. This helps to provide customers with needed information on works status and makes interaction with the DSO more user friendly. Workflows and processes can be started and reduce the average handling time and manual post-processing.

Power map solutions: Clients and partners need more local information on connection possibilities. For those interested in becoming prosumers, these solutions can indicate the maximum possible capacity in their area. There also online maps with power supply outage information.

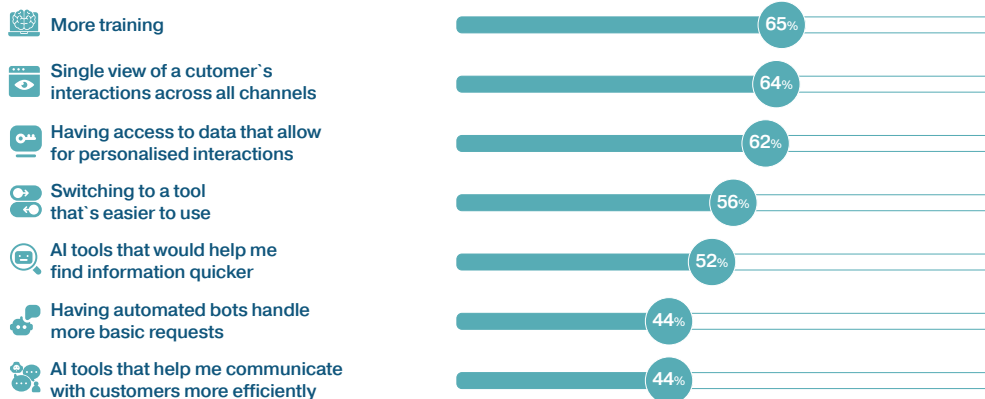
INNOVATION PRIORITY AREAS AMONG SURVEY RESPONDENTS



DSOs are aligning with global trends, driven by operational efficiency, digitalisation, and customer experience enhancement.

The push for self-service via online channels accelerated during the COVID-19 pandemic, prompting DSOs to expand their online service offerings and improve customer experiences.

ASPECTS OF CUSTOMER-FACING TOUCHPOINTS CX LEADERS ANTICIPATE BEING HEAVILY INFLUENCED BY GENERATIVE AI IN THE NEXT TWO YEARS:



*Zendesk CX Trends 2024

AI innovations are becoming increasingly relevant, as global trends indicate their usefulness in quickly finding information, automatically processing basic requests, and enhancing customer communication. DSOs are particularly interested in integrating AI and IVR in customer communication processes.

5

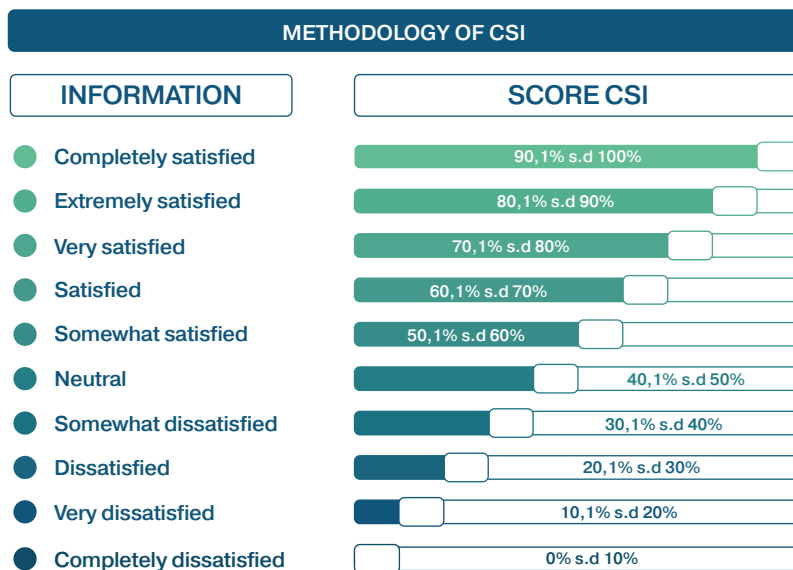
Metrics to Evaluate Customer Experience

CUSTOMER SATISFACTION INDEX (CSI)

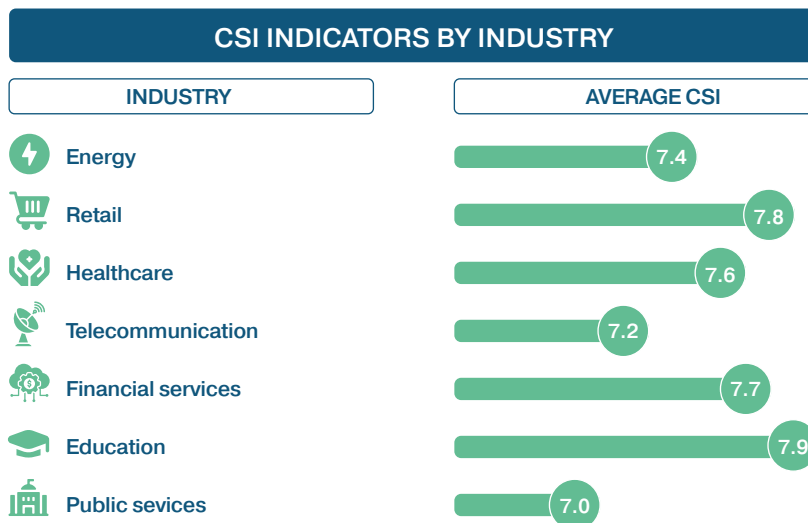
The CSI measures customer satisfaction with an organisation, product, or service, providing insights into both overall satisfaction and specific areas for improvement.

In the countries of the DSOs surveyed, there are no regulatory requirements for CSI levels. However, there is growing awareness that a high CSI contributes to long-term success because it supports enduring community engagement and effective service delivery. As a result, DSOs view investments in customer experience as strategically important.

All participating DSOs measure CSI levels, using a standard methodology. The overall index is calculated as a weighted average of surveys across the Contact Centre, Branch, Digital Channels, and Field Service, among others.



While satisfaction remains a key metric, 33% of DSOs in the research group also use Net Promoter Score (NPS).



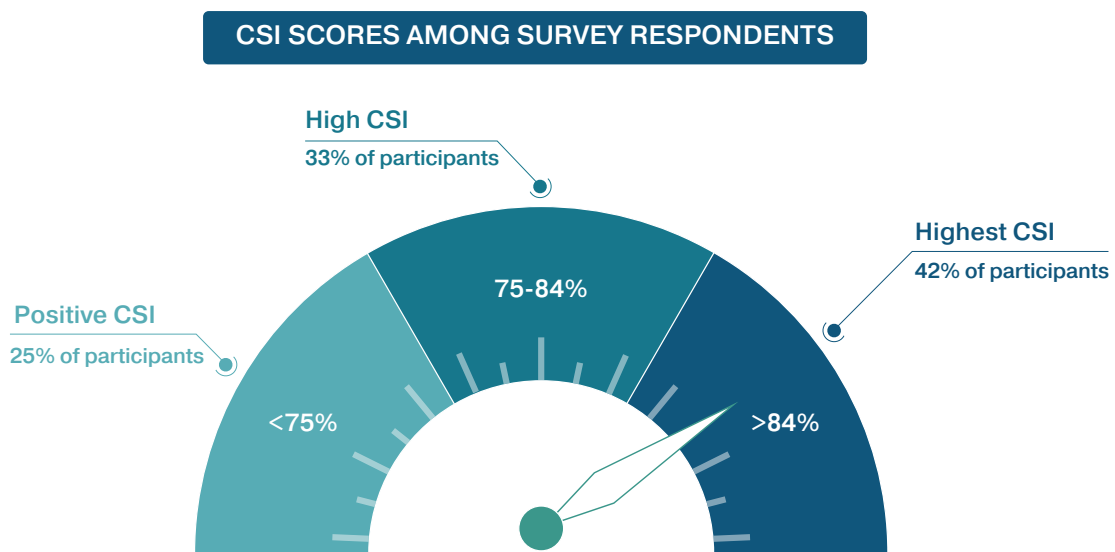
*Wall Street Journal (June 17, 2024)

Additional metrics include:

- Customer Effort Score (CES):**
"How much effort did you have to make to complete the process?"
- Company Effort Score (CoES):**
"To what extent did the DSO engage to support your process?"

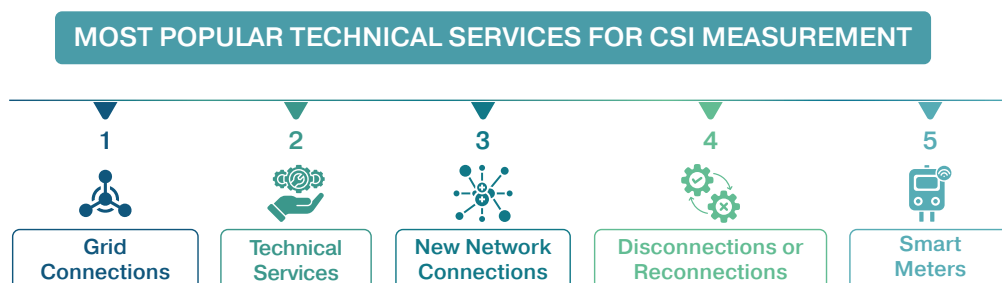
As the Contact Centre is the most popular customer service channel, 60% of the respondents measure its CSI.

The most common CSI metrics include complaint management (40% of respondents) and grid connection quality (35% of respondents).



Satisfaction with technical services is equally important. All respondents measure CSI for these services. The most commonly measured services include:

- Grid connection: Measured by 80% of respondents
- Disconnection and reconnection: Measured by 40%
- Smart meters and technical services: Measured by 50%



6

Policy and Regulation

LEVEL OF REGULATION (NUMBER OF METRICS USED)

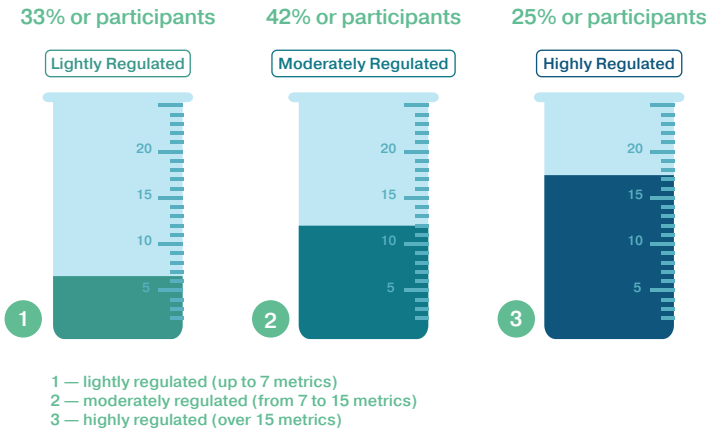


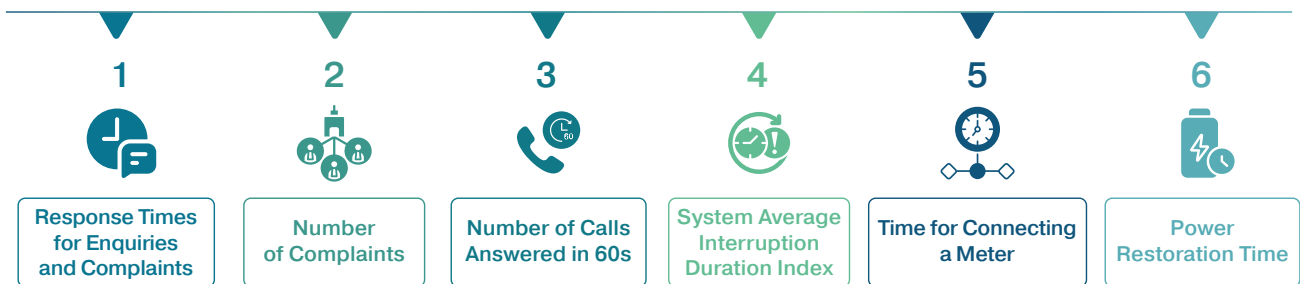
Figure 5: Level of Regulation Among Participants' Countries of Origin

Greece, Austria, and Ukraine are the countries with the highest number of metrics covered in regulation, with more than 15 metrics.

Countries with an average number of metrics (7 to 15) include Spain, Bulgaria, Italy, Ireland, Belgium, and the United Kingdom (only Northern Ireland surveyed).

There is currently no standardised approach to government regulation of customer experience. Service channel variety and differing levels of service development result in varying levels of regulation.

MOST COMMON STATE REGULATION METRICS



The focus of the regulatory environment in most of the surveyed countries is the speed of processing customer complaints, as well as the control of complaints handling. The main source of complaints is power quality.

Regulators also pay attention to control of System Average Interruption Duration Index (SAIDI)⁴, System Average Interruption Frequency Index (SAIFI)⁵, Tiempo de Interrupción Equivalente de la Potencia Instalada (TIEPI)⁶, Número de Interrupciones Equivalentes de la Potencia Instalada (NIEPI)⁷ indicators. There is a practice of forming ratings by controlled metrics in countries where more than one DSO is present, which creates competition and an incentive for systemic improvement of indicators.

4 - System Average Interruption Duration Index (SAIDI):

The average total duration of power interruptions per customer over a specified period.

5 - System Average Interruption Frequency Index (SAIFI):

The average number of power interruptions experienced by each customer during a given time period.

6 - Tiempo de Interrupción Equivalente de la Potencia Instalada (TIEPI):

A Spanish metric analogous to SAIDI that quantifies the equivalent interruption time relative to the installed power.

7 - Número de Interrupciones Equivalentes de la Potencia Instalada (NIEPI):

A Spanish indicator comparable to SAIFI, measuring the average number of power interruptions weighted by the installed power.

POLICY RECOMMENDATIONS

1

Supporting Digitalisation and AI Integration

Provide funding and policies incentives for R&D investments in digitalisation, particularly in advanced customer service channels such as chatbots, IVR, and AI-powered analytics. Broadening the implementation of these technologies in DSO customer service is essential for optimising customer experiences and operational efficiency. Dedicated funding programmes should be established for testing and developing innovative practices and solutions, but these must not come at the expense of other DSO funding.

2

Encouraging Collaborative Platforms

Supporting cross-border collaborations among DSOs to share best practices, co-develop solutions, and leverage economies of scale. Fostering partnerships with technology providers to expedite the adoption of innovative tools and systems.

3

Focusing on Customer-Centric Policies

Implementing policies that enhance customer engagement, such as digital literacy initiatives, to ensure that the energy transition is inclusive and customer driven.

4

Establishing Comprehensive Crisis Management Plans

Developing robust crisis management frameworks is essential to address not only power outages but also natural disasters such as floods, earthquakes, hurricanes, and wildfires, which are becoming more frequent due to climate change. Proactive planning will enhance resilience and ensure uninterrupted service.

5

Ensuring Real-Time Consumption Data Availability

Supporting DSOs in achieving real-time data availability is critical for improving customer services and operational efficiency. Extending implementation timelines can reduce costs and help avoid penalties, allowing for smoother transitions and more cost-effective compliance.

7

Best Practices

As DSOs across Europe continue their digital transformation, numerous innovative practices have emerged to enhance customer engagement, optimise service delivery, and support the energy transition. The following initiatives highlight the sector's commitment to improving service offerings and operational efficiency.

DATA ACCESSIBILITY AND CUSTOMER EMPOWERMENT

E-REDES in Portugal has developed an Open Data Portal to share information with stakeholders such as academia, policymakers, market agents, and consumers. By providing georeferenced data on secondary substations, including installed power and usage levels, the portal has reduced the number of connection condition requests from five to one per area. This improvement has notably enhanced the planning and feasibility of Electric Vehicle Charging Station projects while democratising access to data for other applications.

In Spain, the DATADIS platform provides a single national access point for consumption metering data for over 29 million customers. This initiative, a collaboration among Spanish DSOs (including i-DE and UDF), simplifies the process for customers, who no longer need to register on multiple DSO websites. DATADIS also offers transparency through statistical reports on historical consumption by region or municipality, enhancing data-driven decision-making.

In Ukraine, there is a project led by governmental energy authorities to create the central information and communication platform called DATAHUB. Its purpose is to store and exchange information between all market participants (suppliers, transmission system operators and distribution system operators) on energy consumption, production, and distribution data. DATAHUB has two main functions: 1. A centralised register of commercial metering points, containing data for each site. In the event of a change in technical characteristics, the data is updated. 2. Administration of commercial metering data daily updating of customer data that has an hourly profile (schedule) of electricity consumption. DATAHUB avoids duplication of information among market participants and reduces errors. The processes of changing the supplier, disconnecting/connecting customers for receivables, terminating/extending the term of the electricity supply contract, and initiating a dispute in case of disagreement with commercial metering data are performed through this platform.

In Ireland, ESB Networks has created an online portal where customers with a smart meter can access their consumption for the previous two years. It also includes a number of options for viewing this data.

OPERATIONAL EFFICIENCY AND REAL-TIME MONITORING

To address the increasing complexity of distribution grids due to the integration of renewable energy sources, Spanish DSOs (including UDF and i-DE) have developed the SIORD platform. This shared platform provides real-time data access regardless of the generator's or customer's connection point. By streamlining communication between stakeholders and supporting various communication protocols, SIORD reduces costs and simplifies the commissioning process for new generators.

CUSTOMER EXPERIENCE ENHANCEMENTS

E-REDES has also implemented a "Follow the Team" functionality to improve service order execution. Customers can track the realtime location of technical teams and establish point-to-point conference calls while preserving contact privacy. This initiative has increased the completion rate of service orders on the first visit and strengthened customer relationships by offering greater transparency and control.

DTEK Grids has introduced collaboration with a third party for crisis communications. In times of mass power outages there is a need for convenient and widely used communication channel so the customers can quickly access information on the status of power outage by their address. So DTEK developed automated data exchange with the city app (Kyiv Digital, municipal service of the Ukraine capital city of Kyiv) where any customer can get information on a power outage without the need to contact the DSO. Moreover, there is proactive push notification function that allows citizens to be instantly informed on controlled power outages during crisis situations. Those helped to significantly reduce the load on DSO communication channels and enhanced the customer experience.

8

Participants

This report is the result of the dedicated efforts of the Customer Empowerment Working Group, whose members brought invaluable insights and expertise to its preparation. Their collaboration reflects the shared commitment of DSOs to driving innovation, improving customer experience, and supporting Europe's energy transition.

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Their efforts have been instrumental in creating a comprehensive report that reflects the challenges and opportunities for DSOs in enhancing customer engagement and enabling the energy transition.

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