

# INNOVATE BROADCASTING



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**ors**  
group

  
simpliTV

**INSYS**  
Video Technologies



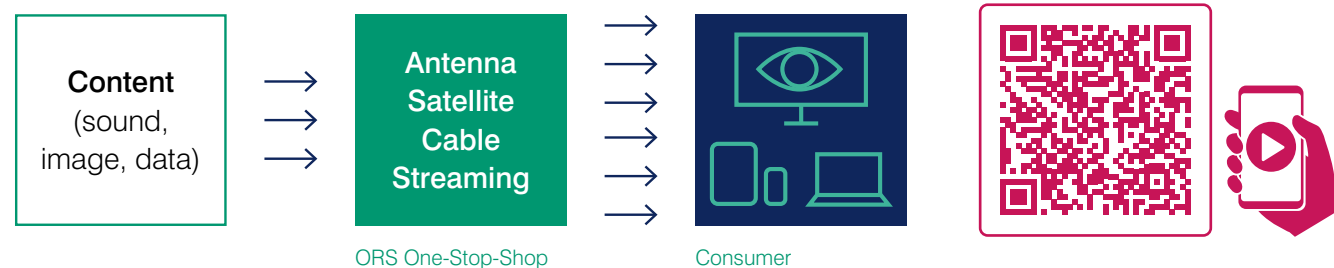


ORS, the expert in TV and radio business, distributes content via antenna, satellite, cable and streaming throughout Austria – linear, live and on-demand.

With its modern infrastructure, ORS provides complete service-oriented solutions for analog and digital transmission of audio and audiovisual services:

As a „One-Stop-Shop“, ORS provides everything from a single source: reliable full service for nationwide broadcasting in top quality:

- 18 years of experience** in digital and analog broadcast transmission
- Over 180 employees** at more than 10 locations
- 2,000 hours** of TV and radio content distributed to Austrian households every day
- State-of-the-art infrastructure** covering the entire country as well as highly fail-safe systems for media communication



ORS' service portfolio includes TV and radio broadcasting via terrestrial, satellite and cable as well as streaming, based on:

**INFRASTRUCTURE**

- Operation of its own broadcast center in Vienna
- 430 transmitter sites for FM, DAB+ and DVB-T2 in Austria
- Extensive co-location offer for shared use at all locations
- Satellite uplink and downlink stations
- Content Delivery Network for program distribution via IP streaming

**PLANNING AND PROJECT MANAGEMENT**

- Planning of terrestrial broadcasting infrastructure
- Planning of individual satellite solutions
- Planning of content via IP solutions
- Creation of frequency and coverage concepts
- Bandwidth and data management for IP distribution

**IMPLEMENTATION AND TECHNICAL OPERATION**

- DVB-T2 (simpliTV)
- DAB+ regional and nationwide
- Signal transmission of international sporting events
- Content distribution, playout and multiplexing
- Program encryption
- Exchange of advertising windows for different distribution channels via a dedicated playout control
- HbbTV signal transmission
- Software updates for end devices
- End device checks
- Smartcard management





## ANTENNA

In Austria, ORS has established digital terrestrial television under the simpliTV brand. Antenna television has exclusively been broadcast in the DVB-T2 standard since 2017. Thanks to its efficient use of frequencies, the standard enables cost-effective distribution of television in SD as well as HD quality.



### TECHNOLOGY: THE FACTS

**430 transmitter sites:** A nationwide network with around 430 transmitter sites throughout Austria enables almost complete coverage with digital terrestrial TV.

**simpliTV packages:** Enjoy 20 channels including HD with the cost-free simpli free package. For those who want more, there is simpli more with over 100 channels and even more HD.

Also included: The simpliTV app with many convenient on-demand features.



**96% coverage:** Via the transmitter network of ORS, 96 percent of the Austrian population is supplied with digital terrestrial TV.



## SATELLITE

In Austria, ORS provides the leading reception path for TV-satellite – in the highest quality. With many years of experience in operating its own broadcast center in Vienna, ORS offers reliable communication solutions for encrypted and unencrypted satellite services throughout Europe. Since 2017, simpliTV has been marketing its own satellite product with even more channel variety in HD and UHD.

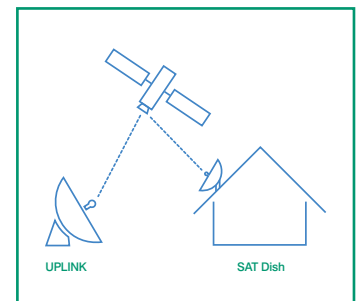
**2 million customers:** Austria is a satellite country, around 2 million TV households use the ORS satellite TV service.

**6 SAT transponders:** ORS has an in-house satellite station for Europe-wide distribution. 5 uplinks are available for the transmission of content.

**60 million households:** Throughout Europe, 60 million households can be supplied with satellite television in the best quality via the ORS broadcast center in Vienna.

**simpliTV packages:** Enjoy 20 channels including HD with the cost-free simpli free package. For those who want more, there is simpli more with over 100 channels and even more HD.

Also included: The simpliTV app with many convenient on-demand features.



ORS is in charge of the content distribution via satellite through the ORS broadcast center and the 5 uplinks in Vienna.







## CONTENT VIA IP

As a professional for moving image communication in the digital age, ORS offers content producers tailor-made solutions for the distribution of their content on different platforms and provides the right streaming product for every distribution requirement.

### VIDEO-STREAMING

ORS provides its customers comprehensive solutions for video streaming – from planning to realization, ORS acts as a One-Stop-Shop, everything is implemented from a single source.

**Best Practice:** Successful streaming projects of ORS include livestreaming of ORF ON and simpliTV Streaming. ORS also successfully implemented the complete live streaming for the Austrian Parliament.

**simpliTV packages:** Enjoy 20 channels including HD with the cost-free simpli free package. For those who want more, there is simpli more with over 100 channels and even more HD.

Also included: The simpliTV app with many convenient on-demand features.



### RADIO STREAMING

ORS offers content providers its expertise in all aspects of the field of content via IP and provides competent solutions for radio streaming.

**Best Practice:** With ORF SOUND, ORS has implemented live streaming for all ORF radio programs.

### VoD

For companies and organizations that want to make their content available to their customers, ORS is the right implementation partner, that develops state-of-the-art VoD portals.

**Best Practice:** edutube, a password-protected homeschooling video platform, was successfully implemented by ORS.



### CDN

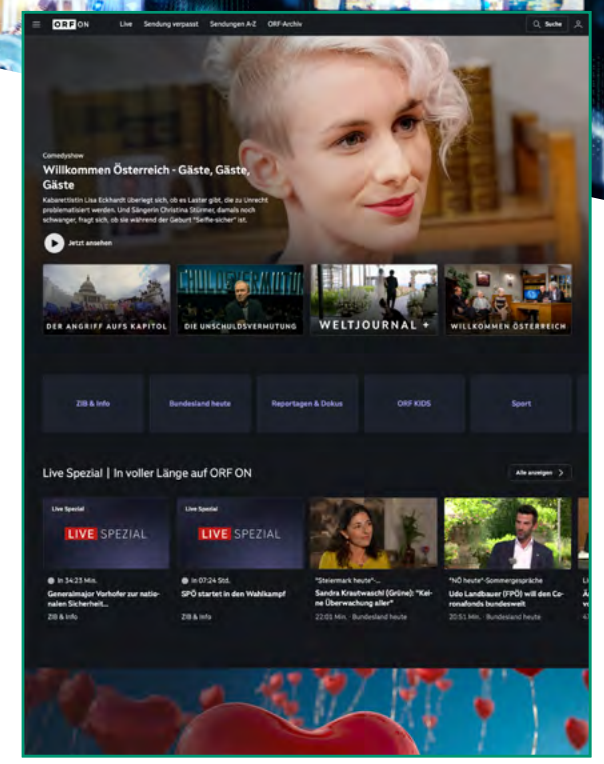
ORS provides encoding and packaging of audio and video data and distributes it via its own high-performance network (CDN) in IP format. Content can be received and streamed via the CDN at up to 500 Gbit/s.

**Best Practice:** All live streams of ORF ON and ORF SOUND library, among others, are distributed out via the ORS CDN.

### METADATA & RECOMMENDATIONS

ORS supports platform operators in optimizing their recommendation systems. Automated recommendation technologies – called „recommendation engines“ – filter information based on the preferences of the respective users and play out content tailored to them.

**Best Practice:** ORS optimized all metadata on the simpliTV streaming platform to guarantee an even better streaming experience.



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## RADIO

Whether analog via FM, digital via DAB+ or via streaming – ORS guarantees state-of-the-art radio solutions and is the ideal service partner for the radio market.

### VHF – ANALOG RADIO

With decades of know-how and a nationwide analog infrastructure with around 275 transmitter stations, ORS ensures the highest availability of VHF radio throughout Austria. The proven standard transmission via VHF is absolutely reliable and delivers the right radio program for every household.

**20 radio programs:** ORS broadcasts more than 20 VHF radio programs in top quality throughout Austria.

**98 percent:** ORS supplies almost the entire Austrian population with radio signals around the clock.

**15 million receivers:** ORS provides radio programs for approximately 15 million FM radios in Austria's homes and vehicles.

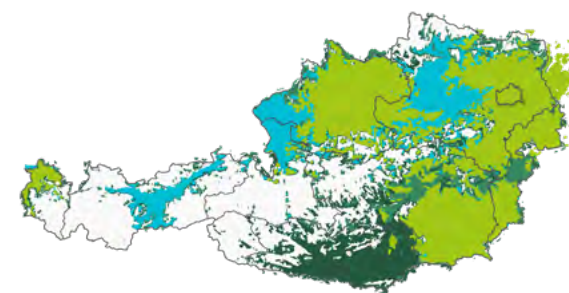
### SHORTWAVE

Shortwave is an important platform for broadcasters to distribute their programs internationally. In Moosbrunn (Lower Austria), ORS operates one of the few shortwave broadcasting centers in Europe. From there, shortwave radio is broadcast worldwide and is transmitted to Africa and the Middle East.

**60 years of experience:** For more than six decades, radio programs have been broadcast worldwide via shortwave from the broadcasting center in Moosbrunn

**70 meters mast height:** The ORS masts are more than 70 meters high and weigh over 320 tons.

**15,000 km distribution:** Due to the technical infrastructure of the shortwave broadcasting center, radio programs can be transmitted over thousands of kilometers.



### DAB+ – DIGITAL RADIO

Digital radio is an attractive addition to analog FM radio: the digital transmission standard DAB+ not only offers listening pleasure in the best quality, but also a greater variety of programs. ORS is responsible for the national and regional distribution of digital radio services.

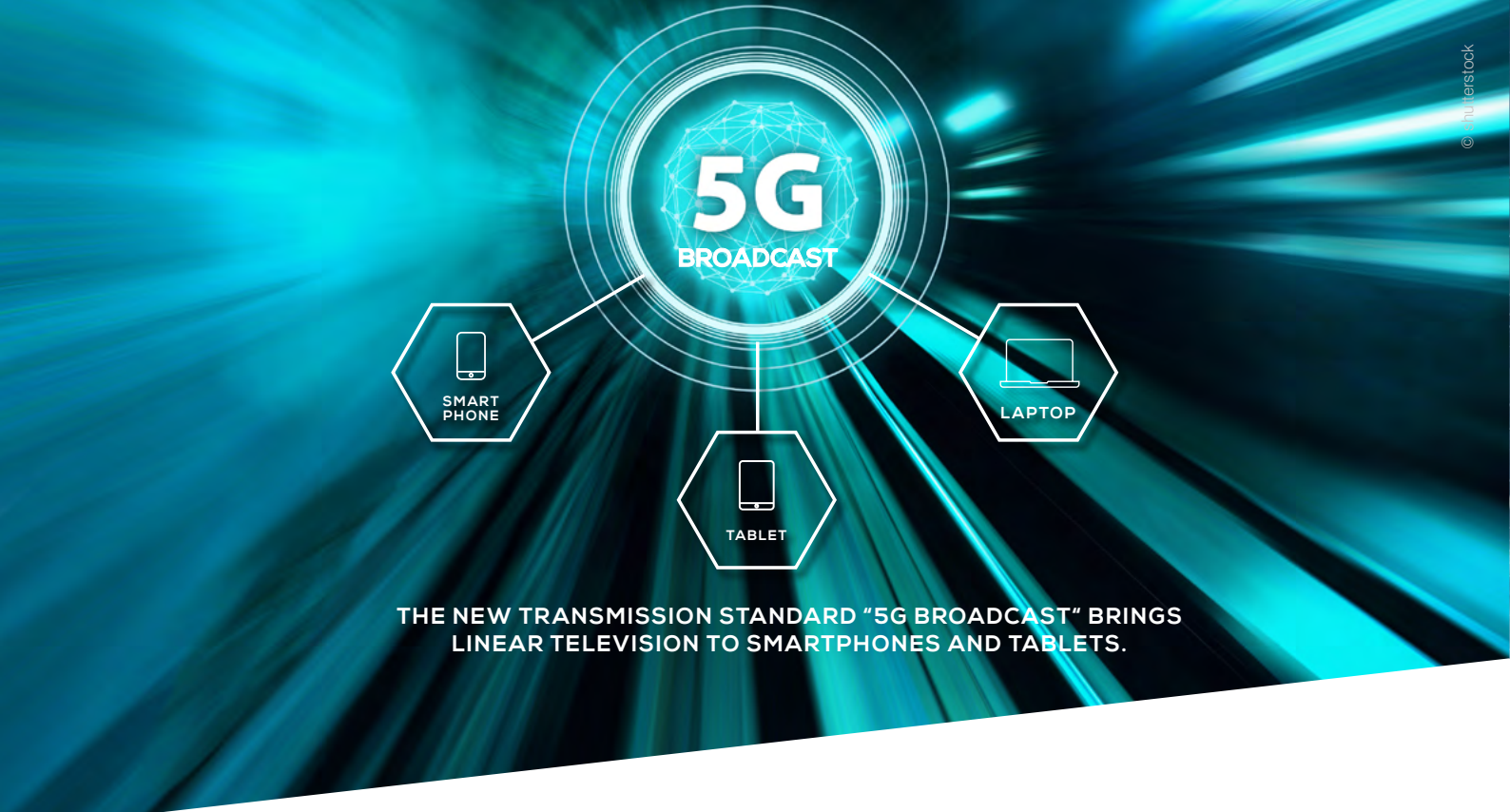
**46 radio programs:** ORS broadcasts 31 digital programs and 15 regional programs throughout Austria, noise-free and in top quality.

**84 percent:** Over 80 percent of the Austrian population can be reached via the ORS' nationwide DAB+ transmitter network.

**2 million receivers:** 20 percent of Austrians own at least one DAB+-capable receiver.







THE NEW TRANSMISSION STANDARD "5G BROADCAST" BRINGS LINEAR TELEVISION TO SMARTPHONES AND TABLETS.



## NEXT GENERATION BROADCAST

In Austria, ORS shapes the future of digital television and radio and continues to drive customer services and innovation in next-generation broadcasting.



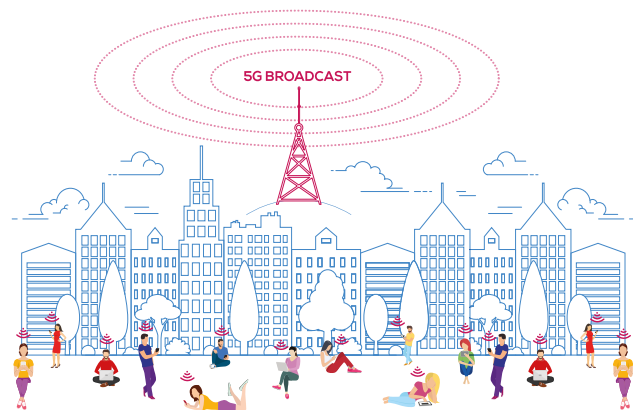
### 5G BROADCAST

With the new transmission standard 5G Broadcast, linear broadcasting content can be directly distributed to mobile devices such as smartphones or tablets without the need for WLAN or Internet.

- With 5G Broadcast an unlimited number of users can be reached simultaneously – without excessive network load or loss of quality.
- Broadcasters can continue to reach their customers directly, without discrimination and at a low cost.
- Consumption of linear TV or radio services does not consume any data volume.
- During live broadcasts of major events, the transmission standard relieves the mobile networks.
- 5G Broadcast has wide-ranging potential for the media industry, e.g., with in-car entertainment for self-driving cars.
- The public also benefits from ORS resilient

infrastructure, as it can be used to send emergency warnings to any mobile device via 5G broadcast in times of disaster and crisis.

ORS is continuing to drive research and development forward and is developing new applications for international TV and radio operators and their customers with the Nakolos project for 5G Broadcast. Therefore, nothing stands in the way of the 5G Broadcast roll-out in Austria in the coming years.



### HYBRID-TV

The term „hybrid television“ or hybrid TV refers to TV sets and set-top boxes that have a built-in Internet interface and can therefore display both television and Internet content.

#### Hybrid TV combines the best of two worlds:

- Linear TV reception (e.g. via antenna or satellite) is supplemented by the flexibility of live and time-shifted content via streaming.
- The on-demand features ensure flexible TV enjoyment. 7-day replay, start/stop, restart or recording with the personal video recorder – the innovative TV experience can be enjoyed not only on smart TV, but also on all mobile devices such as smartphone or tablet.
- Remote controls of hybrid TVs and set-top boxes can be used to access and use additional content (e.g. ORF ON, simpliTV app, etc.) at the touch of a button.

**Best Practice:** The newly developed, hybrid simpliONE Box turns any TV set into a smart TV and enables a flexible, innovative TV experience. Watch live TV as usual via antenna or SAT and additionally, access the full on-demand TV experience through the simpliONE Box. Including access to many more apps in the Google Play Store.



**Live TV:**  
Watch TV anytime, anywhere!



**7-day replay:**  
Catch up on broadcasts for up to 7days!



**Start/Stop:**  
Pause your program at any time!



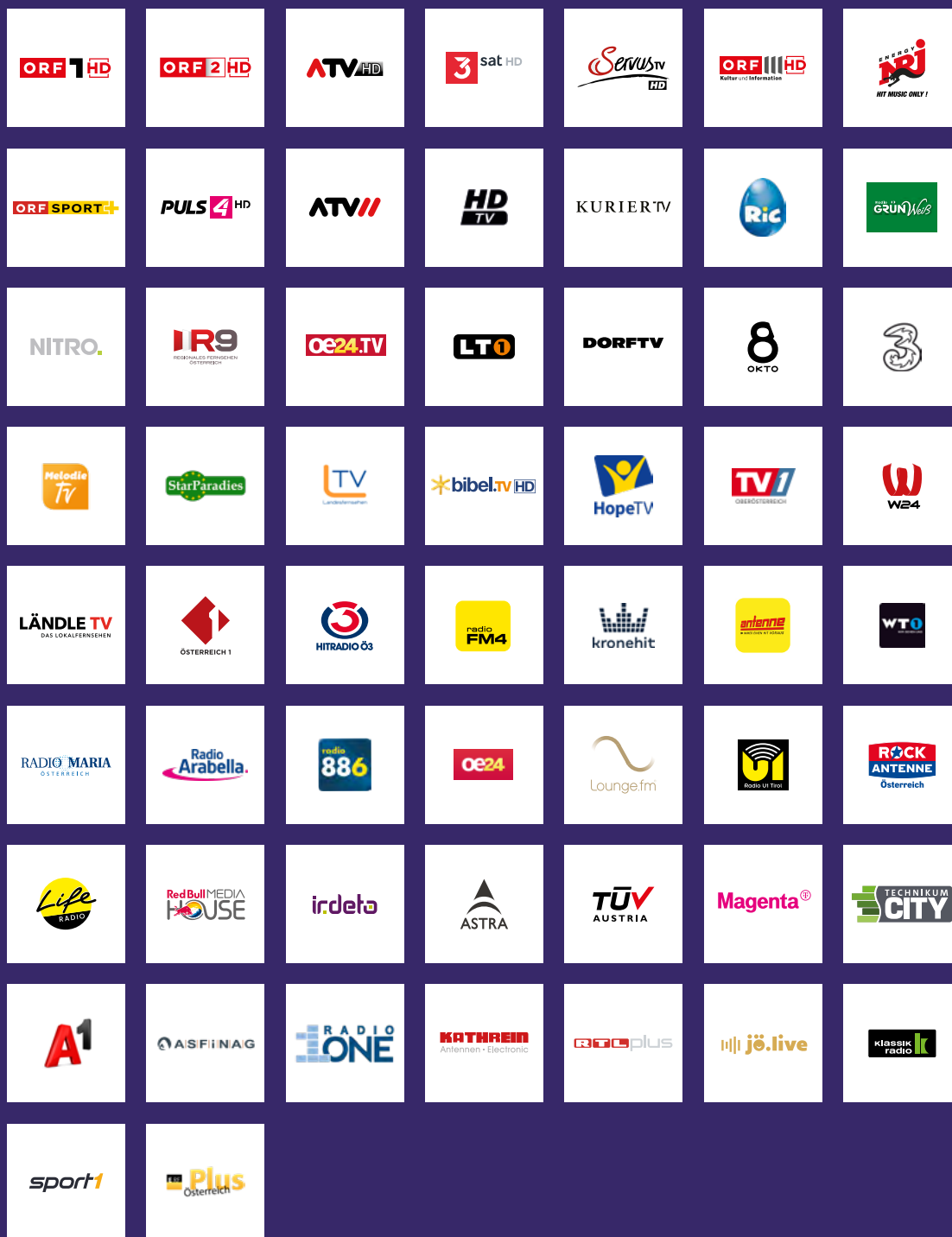
**Restart:**  
Watch any program from the start!



**Record:**  
30 hours of personal online video recorder!







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