Turkcell
and
Turkcell Technology
Well-Positioned to Create More Value

Digital Services
Digital Business Solutions
Techfin Services

Telecom Services

Strong Bond With Customers
State-of-the-art Infrastructure
Advanced Analytics & Technology
Strong & Agile Team

Strategic Focus Areas
Core Competencies
Business Model Based On Digital Transformation

- Main growth & profitability driver
- Necessity item; less volatile
- Strong ARPU growth
- International revenue flow

**Telecom Services**
- Mobile ARPU Growth (YoY): 14.0%
- Residential Fiber ARPU Growth (YoY): 9.4%

**Digital Services**
- Share in Consolidated Revenues: 4%
- Standalone Revenue Growth (YoY): 28%

**Digital Business Solutions**
- Digital transformation trend
- Remote working & education
- Global partners: 20 partnerships

**Techfin Services**
- Non-cyclical and disruptive business
- Tech-savvy & high unbanked population
- Wide range of services

**Drives**
- Driven by digitalization trend
- Fairly growth sensitive
- Data localisation

**Facts**
- Share in Consolidated Revenues: 6%
- Revenue Growth (YoY): 40%
- Paycell Non-Group Revenue Growth (YoY): 3%
- 85%
### Turkcell International

**FINANCIAL HIGHLIGHTS**

<table>
<thead>
<tr>
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<th>Q3 2020</th>
<th>YoY</th>
<th>9M 2020</th>
<th>YoY</th>
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<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>658</td>
<td>25.3%</td>
<td>1,795</td>
<td>24.5%</td>
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<tr>
<td><strong>EBITDA</strong></td>
<td>298</td>
<td>25.8%</td>
<td>819</td>
<td>24.1%</td>
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<tr>
<td><strong>EBITDA Margin</strong></td>
<td>45.2%</td>
<td><strong>0.2pp</strong></td>
<td>45.6%</td>
<td><em>(0.2pp)</em></td>
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</tbody>
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**SUBSIDIARIES AT A GLANCE**

- **Lifecell Ukraine**
  - 14.2% yoy revenue growth in local currency
  - 4G user data usage: 12GB/month, ↑42% yoy
  - Positive bottomline for the quarter

- **Life :) Belarus**
  - 1.4% yoy revenue growth in local currency
  - 4G user data usage: 13GB/month, ↑48% yoy
  - Launched postpaid subscription plans

- **KKTCell TRNC**
  - 18.5% yoy revenue growth
  - Higher data and handset revenues against continued decline in roaming revenues

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1 Figures are based on IFRS.

Note: Remaining 7% comprises other international operations and intra-company eliminations. Ukraine, Belarus and TRNC local currency growth figures are based on stand-alone financials.
Implementing a business model enabling us to offer our cyber security activities carried out in-house to other enterprises, we have developed Domestic and National Cyber Security products and services.

With the ever-growing digitalization of enterprises, the number of systems and business processes connected to internet rise fast. This brings along growing number of global and local cyber security risks. For various reasons, organizations are not always capable of employing their own in-house cyber security experts, or investing adequately to anticipate and prevent potential risks. Thus, implementing a business model enabling us to offer our cyber security activities carried out in-house to other enterprises, we have developed Domestic and National Cyber Security products and services. In addition to the DDoS attack prevention service, which we have offered to corporate clients for years, we continued to develop new services in 2019 and increased our revenues. We have expanded our customer portfolio to over 1,100 users with advanced cyber security services such as Remote Cyber Attack Monitoring and Case Analysis SOC (security operation center) services; various security testing services such as intrusion tests; identity and access management consultancy service and cyber threat intelligence portal BOZOK.
Cyber Defense Centre (CDC) team of Turkcell earned the title of Most Mature SOC (security operations center) Team in the telecommunications industry globally receiving a score of 3.2/4.0 during an audit conducted by Micro Focus Global SIOC team as part of Maturity Level Assessment.
We provide cyber security consultancy services to corporate customers at all levels which is a core component of digital transformation. We manage processes like analysis, infrastructure and testing for our customers. Turkcell Digital Business Services has registered its competency with FIRST (Forum of Incident Response Security Teams) certification, one of the most prestigious certificates in cyber security. FIRST works with accredited security operations centers around the world to ensure that measures are taken against potential threats, and provides access to the best resources for reactive/proactive protection. We are the first company in Turkey with FIRST certification.
The world GSM Association (GSMA), which leads the global mobile communications industry and has more than 800 mobile operator members, presented Turkcell with the "Pioneer Award" for its efforts in IoT security.

Meeting the standards set by the GSM Association, one of the important reference points of the telecommunications industry, Turkcell was also recognized as a leader in IoT security and was presented with "IoT Security Champion" award.
Turkcell Technology has been established in 2007 with the focus of R&D and innovation in Information and Communication Technologies. Foundation of Turkcell Technology is based on 10+ years experience of Turkcell. Today Turkcell Technology provides services and solutions to 100+ million customers in many countries.

In 2013 Turkcell Technology earned R&D center license from the Ministry of Science, Industry and Technology of Turkey. With 950+ researchers, Turkcell Technology is one of the largest R&D centers among ICT based companies in Turkey.

Our R&D center is conducting research on emerging technologies and achievements are being commercialized by novel products, services and solutions. Turkcell Technology also participates in European collaborative research programs and holds board membership for ITEA3 and CELTIC Next clusters of Eureka program.
Turkcell Technology R&D Strategies

**INTERNET of THINGS (IoT)**
- Co-pilot
- Smart Wi-Fi
- SuperCam
- Smart Elevator
- Campus Wi-Fi
- Energy Monitoring
- Voice Assistant
- Power Cut Tracking
- Smart Agriculture
- Predictive Maintenance

**ARTIFICIAL INTELLIGENCE**
- Chatbot
- Voice Assistant
- HR Applications
- Photo and Video Processing
- IoT BigData Analytics

**BLOCKCHAIN**
- First Digital ID Project of Turkey (with TUBITAK)
- The only Turkish company to contribute to development of Linux & HyperLedger
- Data sharing between operators and companies
- New projects with startup companies (Blockchain- PAAS)
- Projects for Supply chain and Mobile payment

**AUGMENTED/VIRTUAL REALITY (AR/VR)**
- HR Applications for the staff
- Dashroom solutions
- Indoor navigation applications
- Network solutions
- Guides for Field engineers

**5G**
- 5G Network Slicing
- Physical Layers
- Connected Car (The largest 5G Vehicular Communication Project in Turkey (H2020))
- Health
- Test automation infrastructure
- Self-organizing networks and AI solutions

**INDUSTRY 4.0 TECHNOLOGIES**
Turkcell Technology R&D Solutions

Business Intelligence Solutions
AI applications, Business Intelligence and Data Analytics, Big Data and Data Warehouse platforms.

Customer Relationship Solutions
Unique customer experience on Digital and Retail Channels including Call Center Applications.

Infrastructure Solutions
Infrastructure and Monitoring Technologies for Corporate and Financial Solutions.

Digital Services and Solutions
Global end-user products such as: BiP, fizy, lifebox, TV+, Yaani, Dergilik, Akademi and Lifecell.

Financial Solutions
Payment Systems, Revenue and Campaign Management.

5G Solutions
Future Mobile Technology Solutions.
THANK YOU
Strengthened with Telecom Capabilities <<Digital>>
SUPPORT TO CORPORATE CUSTOMERS’ DIGITAL TRANSFORMATION WITH END-TO-END SOLUTIONS

We support private sector companies and public institutions during their digital transformation journey with our digital business solutions, another strategic focus area. Offering various solutions, we enable our customers to differentiate from competition while we contribute to digital economy of Turkey. We offer numerous services in various fields including cloud technologies, data center services, cyber security, information technologies and Internet of Things (IoT). We aim to lead the market in 3 years leveraging our extensive sales network, strong partner ecosystem and superior infrastructure.