

## 1.1 Juniper Research Statement on Insights Amid Continuing COVID-19 Impact

### 1.1.1 The Impact of COVID-19

COVID-19, first identified at the end of 2019, has continued to disrupt markets within the technology industry to a degree not experienced before. In the short and medium term, disruption is being caused directly by imposed measures such as social distancing and lockdowns. As a result, consumer spending is decreasing, leaving many industries with significantly reduced revenue streams. During these unprecedented times, there is no indication to precisely when these measures will be relaxed or come to an end.

Beyond the end of these measures, long-term economic impacts arising from the Coronavirus must also be considered. Any prolonged period of reduced cashflow through an economy will bring on an economic recession that will have far-reaching impacts within many markets, including technology markets. As a result, many industries must prepare for both the short-term impacts and the longer-lasting repercussions throughout the economy caused by the virus.

Juniper Research believes that despite the partial removal of lockdown measures in a small number of countries, national economies will not return to growth until 2021. However, this will not be a full economic recovery as national GDPs (Gross Domestic Products) will not reach the same levels predicted before the outbreak of COVID-19. A full recovery to exceed 2019 GDP levels could take significantly longer, and the outlook will differ across different economic sectors and regions.

Juniper Research believes that industries including automotive, retail, and transportation are all prime examples of industries set for long-term negative effects arising from a future economic downturn. These sectors are highly reliant on consumer spending; the reduced spend caused by lockdowns and future reduction of consumer spend caused by economic recession will ensure the impact experienced in these sectors will last long after the pandemic has been declared over.

Notably, Juniper Research acknowledges that conditions affecting the spread of COVID-19 changes daily, and several factors could impact future forecasts. As a result, we caution that forecasts are based on several assumptions and estimations that are likely to change as we learn more about how these market shifts evolve.

### 1.1.2 Juniper Research's Approach to Updating Forecast Suites

We plan to release updated forecast suites that reflect the disruption to markets caused by the spread of the virus to reflect both short-term disruption, caused by social distancing and lockdown measures, and the anticipated long-term disruption caused by resulting economic recession. We plan to release these long-term forecast suites over the next 3 months and continue our commitment to providing actionable insights and up-to-date granular forecast data.

Our updated forecasts will quantify the impact of the virus on each of the markets that we cover, including reduced adoption rates, usage levels, and the resulting revenue or spend where applicable. To achieve this, Juniper Research has categorised each technology market based on the following criteria:

- **Very High Impact:** The market is already experiencing significant disruption, and Juniper Research anticipates this disruption to continue until the end of 2020. Markets that are negatively impacted also face long-term issues as markets struggle to recover from economic impacts arising from the spread of Coronavirus. Despite an end to measures imposed by governments, such as social distancing and self-isolation, markets classified in this sector will feel negative impacts into 2021. In some markets, such as the aviation industry, it will take multiple years to return to pre-virus operational levels.
- **High Impact:** These markets are experiencing strong disruption caused by the virus. Juniper Research believes that strategies to mitigate the negative impacts of Coronavirus will be available, but are likely to have a limited effect. As a result, industries classified in this category are also likely to experience long-term damage that lasts beyond 2021, caused by shrinking economies. For example, many services within the financial sector, such as digital money transfer and remittances, will be subject to faltering economies and reduced consumption, and therefore may experience reduced usage and revenue into 2021.
- **Medium Impact:** These markets will continue to be impacted by the virus but are in a strong position to recover once the pandemic is declared over. However, players in these industries will require significant operational changes to accomplish this recovery. For example, A2P (Application-to-Person) messaging service providers have been impacted by reduced marketing budgets that have wiped this messaging traffic from their networks. However, other services, such as healthcare, have increased traffic over SMS. This has offered these players the ability to protect themselves against impacts arising from the virus to a degree.

- **Low Impact:** We believe that strategies can be implemented in these sectors that will help to mitigate the negative pressure on players in the market. Smaller players in these markets will face the most disruption, as they likely have limited redundancy measures in their production and supply chain operations. However, vendors with a large presence in the market are better protected from future impact. For example, network equipment vendors are uniquely positioned in the market; as the majority of components are manufactured in-house, these vendors are able to control large amounts of the supply chain that are not impacted by external forces, such as COVID-19.
- **Very Low Impact:** For this category, we believe that impacts are relatively low. However, the effects of shrinking economies may have an indirect impact on the market itself. Notably, the majority of these markets are B2B. Juniper Research believes that industries categorised here will be well-positioned to experience minimal impact over 2020 and recover swiftly after the pandemic is declared over. For example, providers of RPA (Robotic Process Automation) and digital twins services will have a small number of clients that require these specialist services.

### 1.1.3 Juniper Research's Next Forecast Suite Updates

Juniper Research is committed to providing high-quality and actionable data to reflect the changing market. Outlined below are the areas that we are updating:

#### Released in April 2020

- Augmented & Mixed Reality

- Digital Advertising
- Digital Commerce
- Digital Therapeutics & Wellness
- Low Power IoT
- M2M
- Wholesale Roaming

**To be released in May 2020**

- 5G Market Strategies
- 5G Networks in IoT
- A2P Messaging
- AI in Fintech
- AI in Retail
- Alternative Lending
- Augmented & Mixed Reality
- Consumer Mixed Reality
- Digital Advertising Fraud
- Digital Commerce Regional Analysis
- Digital Content Business Models

- Digital Identity
- Digital Health
- Digital Money Transfer & Remittances
- Digital Therapeutics & Wellness
- Digital Twins in IoT
- Direct Carrier Billing

**To be released in June 2020**

- AI Strategies for Network Operators
- Autonomous Vehicles & ADAS
- B2B Money Transfer
- Health & Fitness Wearables
- IoT in Retail