

TABLE A-16

**Case study: Iridium Satellite Phone**

(Innovation failure summary)

Variable	Description
Innovation	Iridium satellite phone, launched 1 November 1998
Radical or incremental	Radical
Category	Product
Sector	Mobile electronics and services
Failure timing	Launch stage, failure in August 1999
Failure root cause	<p>No market demand</p> <ul style="list-style-type: none"> <li>• Development began in 1991 when terrestrial cellular networks were limited</li> <li>• The subsequent spread of terrestrial cellular networks would limit the appeal of satellite phones to remote areas</li> <li>• Vast majority of traffic is concentrated in areas where cellular networks were rapidly penetrating</li> <li>• Company leadership did not reevaluate customer acquisition targets in light of growing cellular coverage</li> <li>• Equipment (\$3,000) and service (\$3–\$8 per minute) were very expensive, based on assumption of monopoly and required financial returns</li> </ul>
Failure root cause timing	Product development
Outcomes	<ul style="list-style-type: none"> <li>• Dramatically low customer adoption vs. forecasts and targets required by loan covenants</li> <li>• Company filed for bankruptcy 9 months after launch (August 1999)</li> <li>• Motorola announced that the Iridium satellites would have to be de-orbited in August 2000</li> <li>• Government agreed to 2-year contract for services and \$72 million in funding, and approved sale of assets to Iridium Communications Inc. for \$25 million</li> <li>• Original investors who paid for \$5 billion plus investment to launch 66 geostationary satellites received less than 1% of their investment back</li> </ul>
Business insight into the innovation process	<ul style="list-style-type: none"> <li>• Projects with long development cycles need to reevaluate the technology value proposition as new potential competition emerges</li> </ul>
Pivot	<ul style="list-style-type: none"> <li>• Iridium Communications Inc. operates global satellite communications network mostly for government and commercial applications</li> </ul>
Pivot enabler	<ul style="list-style-type: none"> <li>• Paying one-half of 1 cent on the dollar for network assets</li> <li>• Initial government contract guarantee</li> </ul>

**Source(s):**

National Center for Science and Engineering Statistics and SRI International, special research (2020) of 2010–20 open-access articles, including *MIT Technology Review*, *New York Times*, *Fast Company*, U.S. General Accountability Office, and *Defense News*.