Personal Navigation Devices

Personal Navigation Devices is the fourth consecutive report from Berg Insight analysing the latest developments on the global market for PND turn-by-turn navigation.

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81 percent of PNDs sold in 2015 will have integrated cellular connectivity

There are now well over 200 million turn-by-turn navigation systems in use worldwide, including about 40 million factory installed and aftermarket in-dash navigation systems, more than 120 million Personal Navigation Devices (PNDs) and an estimated 44 million navigation-enabled mobile phones. PNDs still dominate the personal navigation market, especially in Europe and North America, but more and more handset owners are discovering navigation software and services for mobile phones. Historically, Europe has been the main market for PNDs, but North America has now caught up. Shipments in Europe declined to about 15.5 million units in 2009 while shipments in North America increased to 18 million units. In the rest of the world, shipments grew by one million to an estimated 6.5 million units in 2009.

Especially in Europe and North America, where PND penetration is already high, the PND as a device category is facing increasing competition from handset-based navigation services and greater availability of low cost in-dash car navigation systems. Berg Insight believes that PND shipments in Europe and North America have peaked and will gradually decline to about 10 and 14 million units per annum respectively in 2015. New markets in other parts of the world will partly compensate for the decline in the mature markets. Worldwide shipments of PNDs are forecasted to peak at around 42 million devices annually in 2011–2012 and gradually decline to 34 million units in 2015.

It is very likely that several navigation enabled devices and services will co-exist for several years to come. Many consumers will use more than one device or service concurrently, with different devices and services tailored for specific purposes. Handsets are well suited for occasional users or for pedestrian navigation purposes. PNDs are better suited for use in cars by having screens and interfaces specialised for car navigation. Consumers also show a clear preference for large screens that can display realistic scenery. PNDs with 4.3- and 5-inch widescreens now outsell PNDs with 3.5-inch screens.

Several years of fast growth attracted numerous actors from multiple industries to the PND market. More than 100 brands have been available on the European and North American markets in the past. However, as a result of intensified competition and slowing sales growth, a number of players have already exited the PND market. Others, including MITAC and United Navigation have driven market consolidation through acquisitions. At the same time, major device vendors and software developers including Garmin, TomTom and NAVIGON increasingly focus on related products and services, including in-dash navigation systems and handset navigation solutions.

New services and features are becoming more important as an increasing share of PND sales come from replacement devices for existing PND users. Many PND vendors are now developing online services for PNDs with cellular connectivity. Connected PNDs can access dynamic content such as local search, real-time traffic flow information and speed camera locations, as well as local fuel prices and parking space availability. These services can improve the value of PNDs in everyday situations in both familiar environments as well as on trips to new places. Besides leading vendors such as Garmin, TomTom and NAVIGON that offer a portfolio of connected devices in several price segments in multiple countries, several smaller vendors have also introduced connected PNDs in select markets.

The content categories offered as part of connected services are roughly the same today as in 2009. However, the pricing has changed. During 2010, several vendors have reduced the cost of service plans by up to 50 percent. Services now typically cost €50 per year. Moreover, the free service trials bundled with new PNDs have been extended from 3 or 12 months to 12–18 months. The cost of new connected PNDs is also declining. The cheapest connected PNDs introduced in 2010 typically cost 10–30 percent less than similar models launched in 2009.

This report answers the following questions:

- What are the latest trends on the PND markets worldwide?
- How will personal navigation devices and services evolve in the future?
- How can PND vendors drive sales of replacement devices in maturing markets?
- How will the conventional PNDs stand up to the competition from in-dash systems and smartphones?
- How are device manufacturers such as Garmin, Navigon and TomTom positioning themselves?
- What will be the winning formula for connected PNDs and associated services?
- Which navigation related value-added services appeal to consumers?
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### Who should buy this report?

**Personal Navigation Devices** is the foremost source of information about the emerging personal navigation market focusing on the PND market segment. Whether you are a vendor, telecom operator, investor, consultant, application developer or government agency, you will gain valuable insights from our in-depth research.

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- The Global Wireless M2M Market
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