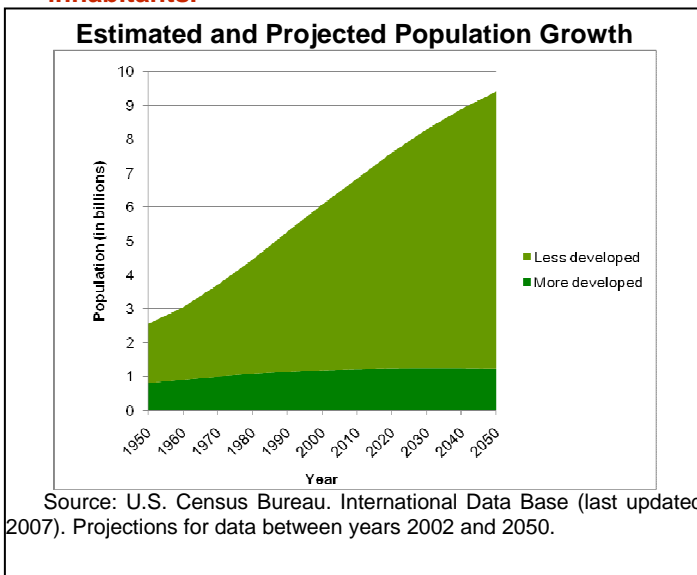




### Population and Income

- The two most important factors influencing passenger mobility are population and per capita income growth.<sup>1</sup>
- By 2050, **today's less developed regions will be home to 85% of an estimated 9.2 billion global inhabitants.**<sup>2</sup>



- The base of the economic pyramid (BOP), defined as those with incomes less than US \$3,000 per capita per year in local purchasing power, consists of **4 billion people who represent a \$5 trillion global consumer market.**<sup>3</sup>

### Transport demand

- As income increases, world travel demand will also increase in roughly the same proportion.<sup>4</sup>
- Households that use public transportation spend only 3-5% of their income on travel; however, for households with one motor vehicle, that share increases to 10-15% of their income.<sup>5,6</sup>
- Around the world, 35% of all trips to work are done so with public transport, which includes buses, trams, trains and minibuses.<sup>7</sup>

### Passenger Transport

- Car ownership is growing worldwide at around 5% annually.<sup>8</sup>
- Traffic fatalities in low and middle-income countries

are expected to increase by 80% between 2000 and 2020.<sup>9</sup>

- Approximately 65% of mopeds and motorbikes worldwide are driven in Asia. In Malaysia and Greece, almost one in five people own a moped/motorbike.<sup>10</sup>
- World bicycle production doubled between 1975 and 2000 to reach 100 million. In 2000, China produced 52 million bicycles—just over half of the world total. The U.S. is the world's largest bicycle export market, and 97% of U.S. demand is met by imports.<sup>11</sup>
- In 2003, it is estimated that train passengers traveled 2.2 trillion kilometers.<sup>12</sup>
- It is estimated that there were 1.6 billion aircraft passengers in 2000.<sup>13,14</sup>

### Freight Transport

- **Inefficient distribution and delivery services add to economic barriers at the base of the pyramid.**<sup>15</sup>
- The fastest growing air freight markets connect Asia-Pacific to Europe and North America.<sup>16</sup>
- In 2003, 8 trillion metric ton-kilometers of rail freight were carried.<sup>17</sup>
- Nearly half of freight vehicles worldwide are in North America.<sup>18</sup>
- More than 75% of all shipping containers are loaded or unloaded in China.<sup>19</sup>

### Information & Communication Technology

- About 2.8 billion mobile phones are in use, and approximately 1.6 million are being added daily.<sup>20</sup> Around **85% of the new mobile phone subscribers everyday are from emerging economies.**<sup>21</sup>
- In the first quarter of 2007, China averaged 6.5 million new mobile phone subscribers per month.<sup>22</sup>
- Developed countries had 8 times the Internet user penetration rate of developing countries in 2004.<sup>23</sup>

### Mobility & ICT for Development

In the developing world, information and communication technologies can enable billions of people to participate in the world economy by breaking down the spatial barriers between people and distant markets and employers. Business has the unique opportunity to bridge this gap by meeting market demand with products and services that can facilitate development.



## Notes

<sup>1</sup> Schäfer, Andreas. "Long-Term Trends in Global Passenger Mobility. *The Bridge* 36, no. 4 (2006): <http://www.nae.edu/nae/bridgecom.nsf/weblinks/MKEZ-6WHQ3Q?OpenDocument> (Accessed 6 June 2007)

<sup>2</sup> United Nations. Department of Economic and Social Affairs. Population Division. *World Population Prospects: The 2006 Revision*. 2007. Available at: [http://www.un.org/esa/population/publications/wpp2006/WPP2006\\_Highlights\\_rev.pdf](http://www.un.org/esa/population/publications/wpp2006/WPP2006_Highlights_rev.pdf) (accessed 5 June 2007)

<sup>3</sup> World Resources Institute and International Finance Corporation. *The Next 4 Billion: Market Size and Business Strategy at the Base of the Pyramid*. 2007.

<sup>4</sup> Schäfer, Andreas. "Long-Term Trends in Global Passenger Mobility. *The Bridge* 36, no. 4 (2006): 1. <http://www.nae.edu/nae/bridgecom.nsf/weblinks/MKEZ-6WHQ3Q?OpenDocument> (Accessed 6 June 2007)

<sup>5</sup> Original source: Zahavi, Y. 1981. The UMOT-Urban Interactions. DOT-RSPA-DPB 10/7. Washington, D.C.: U.S. Department of Transportation.

<sup>6</sup> Note: In a more recent study, Schäfer (2006) found very similar patterns. See note 6 for full reference.

<sup>7</sup> Dorling, Danny. 2006. "Worldmapper Dataset 142: Public Transport to Work" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=142>

<sup>8</sup> The Economist. *The drive for low emissions*. 31 May 2007.

<sup>9</sup> World Health Organization. 2004. World Report on Road Traffic Injury Prevention. [http://www.who.int/world-health-day/2004/infomaterials/world\\_report/en/index.html](http://www.who.int/world-health-day/2004/infomaterials/world_report/en/index.html)

<sup>10</sup> Calculated by Dorling, Danny. 2006. "Worldmapper Dataset 032: Mopeds & Motorcycles" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=32>. Data sources include World Bank 's *World Development Indicators 2005* and the United Nations Development Programme's *Human Development Report 2004*.

<sup>11</sup> Earth Policy Institute (2002). Eco-Economy Indicators. "Bicycle Production Breaks 100 Million." Janet Larsen. <http://www.earth-policy.org/Indicators/indicator11.htm>

<sup>12</sup> Calculated by Dorling, Danny. 2006. "Worldmapper Dataset 030: Rail Passengers" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=30>. Data sources include World Bank 's *World Development*

*Indicators 2005* and the United Nations Development Programme's *Human Development Report 2004*.

<sup>13</sup> Calculated by Dorling, Danny. 2006. "Worldmapper Dataset 029: Aircraft Passengers" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=29>. Data sources include United Nations Environment Programme (2005) and the United Nations Development Programme's *Human Development Report 2004*.

<sup>14</sup> Note: for every flight a person takes, he or she is counted as an aircraft passenger. Consequently, some people are passengers many times in a year, and so far fewer than 1.6 billion individual people fly in a year.

<sup>15</sup> World Resources Institute and International Finance Corporation. 2007. *The Next 4 Billion: market size and business strategy at the base of the pyramid*.

<sup>16</sup> Morales, Dan. "Commercial Cargo Needs, Markets and Metrics" 16.886 presentation (25 February 2004) [http://ocw.mit.edu/NR/rdonlyres/Aeronautics-and-Astronautics/16-886Spring2004/6EDA9B4F-CD7A-4880-8B69-4268DDDC5695/0/Morales\\_rev.pdf](http://ocw.mit.edu/NR/rdonlyres/Aeronautics-and-Astronautics/16-886Spring2004/6EDA9B4F-CD7A-4880-8B69-4268DDDC5695/0/Morales_rev.pdf)

<sup>17</sup> Calculated by Dorling, Danny. 2006. "Worldmapper Dataset 034: Rail Freight" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=34>. Data sources include World Bank 's *World Development Indicators 2005* and the United Nations Development Programme's *Human Development Report 2004*.

<sup>18</sup> Calculated by Dorling, Danny. 2006. "Worldmapper Dataset 033: Vehicle Freight" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=33>. Data sources include World Bank 's *World Development Indicators 2005* and the United Nations Development Programme's *Human Development Report 2004*.

<sup>19</sup> Calculated by Dorling, Danny. 2006. Worldmapper Dataset 038: Container Ports" SASI, University of Sheffield, <http://www.sasi.group.shef.ac.uk/worldmapper/display.php?selected=38#>. Data sources include World Bank World Development Indicators 2005: Series: Container port traffic TEU: (twenty foot equivalent units, IS.SHP.GOOD.TU).

<sup>20</sup> The Economist. Survey: *Telecoms. A world of connections*. 26 April 2007. Available at: [http://www.economist.com/surveys/displayStory.cfm?story\\_id=9032088](http://www.economist.com/surveys/displayStory.cfm?story_id=9032088)

<sup>21</sup> BBC News. "Mobile phone lifeline for world's poor" (19 Feb. 2007). <http://news.bbc.co.uk/1/hi/business/6339671.stm> (accessed 11 June 2007).

<sup>22</sup> Indiatimes Infotech. "China adds 6.5 mn mobile users each month" [http://infotech.indiatimes.com/China\\_adds\\_65\\_mn\\_mobile\\_users\\_each\\_month/articleshow/2004865.cms](http://infotech.indiatimes.com/China_adds_65_mn_mobile_users_each_month/articleshow/2004865.cms) (accessed 11 June 2007)

<sup>23</sup> International Telecommunication Union. <http://www.itu.int/ITU-D/ict/statistics/maps.html> (accessed 11 June 2007)