



## World Robotics 2030

**Boston Consulting Group** has put an interesting lens to the next decade of robotics, highlighting “seven unfolding developments that will influence the direction of robotics in the next ten years.”

We’ve excerpted parts of the longer text. Please see the full paper: [How Intelligence and Mobility Will Shape the Future](#)

“This research illustrates the fundamental difference between automation technology widely applied in factory environments today and the radical shift that lies ahead.” —Boston Consulting Group

### BCG’s seven unfolding developments

#### **#1 Professional services robots will dominate the sector.**

Currently only a bare sliver of the market, professional services robots will have sales that may be more than double those of conventional and logistics robots.

We expect the global robotics market to climb from about \$25 billion this year to between \$160 billion and \$260 billion by 2030, with market share for professional services robots hitting up to \$170 billion and industrial and logistics robot sales topping off at about \$80 billion.

## **#2. Changing consumer preferences and social trends will accelerate the need for advanced robotics solutions.**

The consumer-driven demand for quicker deliveries of customized products will lead to the expansion of robot capacity in manufacturing individualization and logistics applications. Meanwhile, aging demographics will result in a greater need for the use of mobile services robots to assist in personal hygiene, exercise, meal delivery, and other jobs.

An increasing emphasis on recycling and other sustainability measures will require robots to take on complex disassembly and sorting tasks.

## **#3. Robots will increasingly take over traditionally lower-paying and less skill intensive jobs.**

The combination of a shortage of manual laborers and wage escalation in formerly low-wage countries will drive a more rapid replacement of humans with robots. Factory worker wages in China have doubled since 2007 and risen by more than 50% in India over the same period.

## **#4. Artificial intelligence and other technological advances will enhance human-to-robot interactions.**

Rapidly developing breakthroughs in technologies involving machine intelligence, connectivity, and control will enable expanded robot capabilities and scope while simplifying human-to-robot interactions.

Among the most promising innovations, artificial intelligence (AI) will allow robots to handle unsupervised, unexpected situations; swarm intelligence will increase the flexibility of mobile robots to share and alter tasks on location; and imaging systems will enhance autonomous inspections, analysis, and movements.

## **#5. Robot capabilities will include the ability to learn.**

Today, simulation tools are used to teach robots how to solve problems in the real world. But this brute force method isn't satisfactory because situational complexity often makes it impossible to train robots to respond to unexpected events in flexible and intelligent ways.

However, new research from nonprofit artificial intelligence think tank OpenAI that focuses on guiding neural networks to navigate progressively more-difficult and randomized environments appears to be producing strong results.

**#6. Semi-autonomous mobile machines will increasingly manage tasks in pre-mapped environments.**

By 2030, we estimate that Level 3 autonomous vehicles will account for about 8% of new car sales.

At Level 3, the vehicle drives itself temporarily on relatively unencumbered roads and in clear weather conditions and alerts the driver to take over when it is confronted with a situation it cannot handle.

Level 3 mobile robots will be able to autonomously navigate efficiently in predefined settings, such as a warehouse, signaling, or stopping when help is needed from a human.

**#7. Asian robotics companies, currently a small slice of the market, will be competitive with US and European manufacturers.**

Korean and Chinese robotic companies—many of which debuted in just the past ten years—have a limited market presence today, but such firms in Asian countries will likely enjoy substantial growth in the next decade.

See full paper Boston Consulting Group: [How Intelligence and Mobility Will Shape the Future](#)

There's link for it at Asian robotics review.

So, if you are planning a career, a career move, or just job hunting, robotics or something with robotics in it is definitely something to consider.

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