


# The Goods on Goods-to-Person Technologies

Side-by-side comparison of automated goods-to-person picking technologies

| Goods-to-person technology  | Item velocities* |      |     |      |           | Storage density**     | Floor space savings | Labor savings | Potential system throughput** | Cost savings  |
|-----------------------------|------------------|------|-----|------|-----------|-----------------------|---------------------|---------------|-------------------------------|---|
|                             | very slow        | slow | med | fast | very fast | 1 = worst to 5 = best |                     |               | 1 = least to 5 = most         |   |
| Vertical Carousel Modules   |                  | x    | x   |      |           | 4                     | 5                   | 4             | 3                             |    |
| Horizontal Carousel Modules |                  | x    | x   |      |           | 3                     | 4                   | 4             | 4                             |    |
| Vertical Lift Modules       |                  | x    | x   |      |           | 4                     | 5                   | 4             | 3                             |    |
| Crane Based Mini-Load ASRS  |                  | x    |     |      |           | 4                     | 4                   | 5             | 2                             |    |
| Vertical Buffer Modules     |                  | x    | x   |      |           | 4                     | 4                   | 4             | 4                             |  |
| Robotic Shuttles            |                  | x    | x   | x    |           | 4                     | 4                   | 5             | 5                             |  |
| Robotic Cube Storage        |                  | x    | x   | x    |           | 5                     | 5                   | 5             | 4                             |  |
| Floor Robots                |                  | x    | x   | x    |           | 3                     | 2                   | 4             | 4                             |  |

\* It's not recommended to store very slow or very fast movers in automation.

\*\* Dependent upon system design.