Exploiting Automation

MCDP 1 points out that a significant advantage can be gained by being first to exploit a development in the art and science of war. In that vein, a military that is slow to exploit technological advances and adapt new ways of fighting opens itself to catastrophic defeat. As we continue to reap the benefits of technological progress in many warfighting areas, our principal learning curve today involves capturing the full potential inherent in automation. To do this, we will benefit from taking a broader perspective on man-machine interaction, which may be "tethered" (a Marine and his computer) or "unmanned" (a squad and its robot). The overarching challenge, as machines become more capable and autonomous, is how to put people and things together in the most effective pairings for the mission at hand. Automation can mitigate risk, reducing the exposure of humans to harm, and reduce the workload on personnel, both of which are of special interest to units operating with smaller footprints or operating in a distributed manner. As machines advance from performing repetitive tasks to dynamic workloads, it will free people to focus on the things they do uniquely or best. To fully exploit the power of automation, we must:

- Refine the concept of manned-unmanned teaming (MUM-T) to integrate robotic autonomous systems (RAS) with manned platforms and Marines.
- Develop operating concepts that support and embrace RAS as a critical enabler.
- Develop unmanned reconnaissance and surveillance systems to investigate littoral environments and complex terrain features (sewers, tunnels, subways, buildings, caves, etc.).