In traditional supervisory control and data acquisition (SCADA) systems, most sensors are wired, which limits their use. Integrating Wireless sensor networks (WSNs) with SCADA and industrial control systems would make monitoring more flexible. Integrated SCADA and WSN capabilities raise the possibility of realising flexible, maintenance-free systems suitable for most industrial and field operations using low power, battery-operated solutions that offer a low cost, wireless alternative to traditional cabled systems. In this work, we discuss the potential benefits and challenges that are encountered when WSNs are integrated into process automation systems.