Abstract: Collection of accurate, complete and reliable field data is not only essential for active management of construction projects involving various tasks, such as material tracking, progress monitoring and quality assurance, but also for facility/infrastructure management during the service lives of facilities/infrastructure systems. Limitations of current manual data collection approaches in terms of speed, completeness and accuracy render these approaches ineffective for decision support in highly dynamic environments, such as construction and facility operations. Hence, there is a need to leverage the advancements in automated field data capture technologies to support decisions during construction and facility operations. These technologies can be used not only for acquiring data about the various operations being carried out at construction and facility sites, but also for gathering information about the context surrounding these operations and monitoring the workflow of activities during these operations. With this, it is possible for project and facility managers to better understand the effect of environmental conditions on construction and facility operations, as well as to identify inefficient processes in these operations. This paper presents an overview of the various applications of automated field data capture technologies in construction and facility fieldwork. These technologies include image capture technologies such as laser scanners and video cameras, automated identification technologies such as barcodes and Radio Frequency Identification (RFID) tags, tracking technologies such as GPS and Wireless LAN, and process monitoring technologies such as on-board instruments (OBI). The authors observe that though there exist applications for capturing construction and facility fieldwork data, these technologies have been underutilized for capturing the context at the fieldwork sites as well as for monitoring the workflow of construction and facility operations.