Subcategory	Level 1	Level 2	Level 3	Level 4	Level 5
Documentation	All documentation fully paper based	All documentation fully electronically, no interfaces to equipment	All documentation fully electronically with unidirectional interfaces from process equipment to integrate relevent operational parameters	All documentation fully electronically with bidirectional interfaces to process equipment to exchange all opertional parameters and settings	All documentation runs fully electronically with bidirectional interfaces to equipment incl. Monotoring-, QC-Modules to exchange all opertional parameters and settings. Base for electronic release automatically requested by QA.
Core competencies of pharmaceutical staff	Staff is focusing only on manufacturing activities and logistics within the pharmacy.	Staff is joining planning meetings with physicians and care unit and cares for the drug stock on the ward	Staff is joining tumour boards and integrated into therapy decisions and cares for the drug supply of the patients	Staff fully covers manufacturing and clinical aspects and is fully accepted partner for physicians. Patients are trained by pharmacists in handling drugs before they are leaving the hospital.	Pharmacists are working on the ward covering all pharmaceutical aspects, fully automated, validated manufacturing process is mainly supervised by technical stuff with the required input from the pharmacist, available systems for clinical decisions. Patients are trained by pharmacists in handling drugs with using digital tools before they are leaving the hospital.
Planning and time recording	Planning and record of time stamp fully paper based without transparent visualization.	Planning of staff is visualized on a clipboard using flexible elements which can be easily moved. Situation is discussed during an huddle and/or send to employees by photo onto the smartphone. Presence time is recorded manually.	Planning of staff is done by an intelligent table calculation program and send to employees by email. Project specific automated recording of presence time in correlation to specific task (dispensing, Clinical Services e.g.) for some of staff.	Planning of Staff is done by a professional Software package covering competencies and absences. Results are displayed on a central flat screen located in the department and send to the individual smartphones. Project specific automated recording of presence time in correlation to specific task (dispensing, Clinical Services e.g.) for all staff.	Fully automated system that proposes required human capacity in correlation to the demand using interfaces to ERP-software. Results are communicated to the staff by App with individual time dependend activity table. Project specific automated recording of presence time in correlation to specific task (dispensing, Clinical Services e.g.) for all staff. Intelligent evaluation of planned and invested working time for optimization of staff deployment over all working shifts.
Staff education (tools and processes)	Staff education processes are fully paper based, unautomated and not linked.	Staff education processes are minimally linked and automated using a spreadsheet software. Staff training is created and deployed manually as non interactive front presentation. Compliance is also tracked using spreadsheet rules administetered by a pharmacist. Staff members do not have access to their compliance data.	Staff education processes are moderately automated by a spreadsheet manager. Job description is broken down in education modules linked to the staff. Compliance is also tracked using spreadsheet rules administetered by a pharmacist. Staff members do not have access to their compliance data. Training incorporates learning guides and validation of knowledge.	Staff education processes are mostly automated. Job description is broken down in education modules linked to the staff. Compliance is tracked electronically and stored in the cloud. Department leaders have access to dashboards showing the current status of required training. Staff members have access to their compliance data and receive automated reminders of training that has not yet been completed. All areas of a specific training department are covered to ensure a through and hands-on approach to gain knowledge about the entire process for medication management. Education focuses on needs in the domains to which the trainee will be working.	Staff education processes are fully automated. Education modules are created and deployed digitally on an annual basis. Administration and staff are automatically notified of completion and non-compliance, and dashboards show the current status across the department. The excution status of electronic sessions can be checked, new modules proposed and directly initiated from the dashboard. All users are given the base knowledge of all systems involved in patient care. Each trainee receives advanced training in the core area of their job. The training also entails detailed review of the individual's specific role. If the users signs any activity in a software module, e.g. electronic batch record, the system checks that the necessary training has been performed.