



# *Status of Installation and Commissioning Database*



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# Development Plan – Quick overview

- 1st Quarter **January-February-March**
  - ◆ Development of MySQL database
  - ◆ Development of early software application functionality
  - **Output:**
    - ✓ Database fully ready
    - ✓ Advanced filter implemented for pre-filled PMT's
    - ✓ Functionality to save newly received components at CERN into the database
- 2nd Quarter **April-May-June**
  - ◆ Development of main software application functionality
  - ◆ Development of user interface for main functionality
  - **Output:**
    - ✓ CRUD functionality for all components
    - ✓ Support of disassembly/assembly/update processes
    - ✓ User interface to operate main software application functionality
- 3rd Quarter **July-August-September**
  - ◆ Development of main software application functionality
  - ◆ Functionality for additional requirements
  - **Output:**
    - ✓ Bar-code recognition feature
    - ✓ Feature for assistance(hints, inaccuracy checker, error/warning handler)
    - ✓ Support of all additional requirements
- 4nd Quarter **October-November-December**
  - ◆ Setting up software application security & authentication
  - ◆ Testing of the software application
  - ◆ Creating technical documentation and user manual
  - **Output:**
    - ✓ Software application with security & authentication
    - ✓ Bug free
    - ✓ Technical documentation and user manual

# Distribution of Projects by the Quarters

## 1st Quarter **January-February-March**

### Project #01: MySQL DB Development

1. Creating plan to save component modification histories
2. Setting up backup and recovery plan

Manpower: 1FTE

Total: 4 Weeks

Output: MySQL database

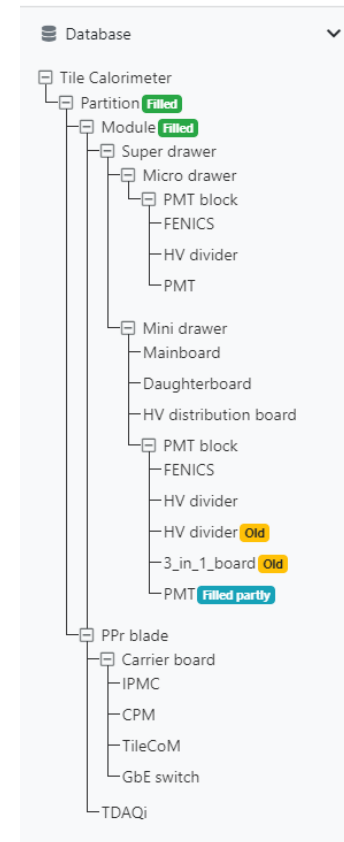
### Project #02: Development of early Application Functionality

1. Implementing advanced filter for component properties and add possibility to sort rows
2. Creating priority list to different part of components what is being received at CERN and creating functionality to add such components into the database

Manpower: 1FTE

Total: 6 Weeks

Output: JS/Php Application



PMT Add PMT							
PMT serial_number	PMT Block ID	Module	Pos in legacy tilecal	Pos in phase2 tilecal	Beta	HV nominal	QI
110003					6.482	708	20
110005					6.581	687	20
110032					6.385	733	21
110041					6.688	641	20
110050					6.417	667	22
110053					6.599	676	21
110054					6.87	679	21
110055					6.451	678	22
110056					6.796	660	22
110058					6.599	652	22
110062					6.759	686	20
110064					6.663	714	20
110068					6.786	667	22
110069					6.818	662	21
110074					6.694	675	22
110077					6.737	670	19
110079					6.665	644	21
110080					6.655	694	21
110090					6.76	657	23
110092					6.758	666	22

# Distribution of Projects by the Quarters

## 2nd Quarter April-May-June

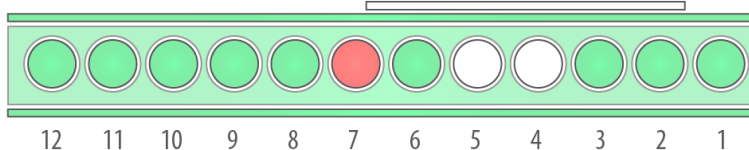
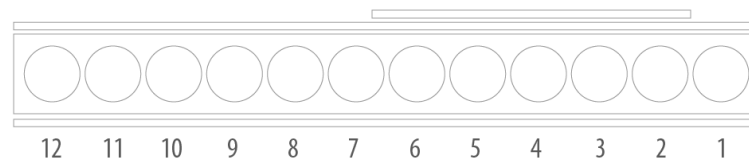
### Project #03: Development of Application Functionality & User Interface

1. UI: Creating Input Controls (buttons, text fields, check-boxes, radio buttons, drop-down lists, list boxes, toggles, date fields, tables for database records, and input forms for Create, Update and Disassembly/Assembly/Reception of components at CERN processes.
2. UI: Creating Informational Components (icons, progress bar, notifications, message boxes, modal windows)
3. Writing modules for CRUD (Create, Read, Update, Delete) operations for all components.
4. Writing modules for composite component Disassembly/Assembly/Update processes.

Manpower: 1FTE

Total: 13 Weeks

Output: JS/Php Application



Disassembly ▾ Assembly ▾ Reception of components at CERN ▾

Super drawer  
PMT block

Keep in mind that application functionality is not working yet.

Mini drawer Assembly

id Mini Drawer Frame ID

Please scan Mini drawer frame barcode or enter it manually

Please select Mini Drawer Components and enter their barcodes

+

+

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12 11 10 9 8 7 6 5 4 3 2 1

Status

Enter status

Additional Comments

Save Cancel

# Distribution of Projects by the Quarters

## 3rd Quarter **July-August-September**

### Project #04: Development of main functionality and connecting them to UI elements

1. Writing module of Barcode recognition based on barcode structure
2. Writing module for bringing either existing record for scanned component if it is already in the DB, or bringing an interface for that specific component that proposed to create a corresponding entry
3. Connecting components tree to a database
4. Writing module to give assistance during the process of inserting/updating data in the database (providing hints, giving warnings in case of inaccuracy and in case of any type of system error)
5. Creating modules for additional requirements. (Recognize super drawer structure based on partition and module; Check compatibility between the PMT block and the slot which it is being inserted in; Recognize restricted positions for PMT blocks in Super drawer, etc.)

Manpower: 1FTE

Total: 13 Weeks

Output: JS/Php Application

## 4th Quarter **October-November-December**

### Project #05: Application security and Testing

1. Creating the Gitlab repository
2. Setting up connectivity with Database
3. Setting up authentication and application security
4. Functionality testing, Usability testing, Interface testing, Compatibility testing, Performance testing, Security testing.

Manpower: 1FTE

Total: 4 Weeks

Output: JS/Php Application; Gitlab repository

### Project #06: Development of technical documentation of application code and database structure

Manpower: 1FTE

Total: 4 Weeks

Output: Technical documentation

### Project #7: Creating user manual providing troubleshooting, with the explanation of conflict cases and possible ways for the solution

Manpower: 1FTE

Total: 4 Weeks

Output: User Manual

# Thanks for attention, comments are welcome

The screenshot displays the 'TILECAL ELECTRONICS DATABASE' web application. The browser address bar shows the URL `tilecal-electronics-db.cadcamge.ch/pmt?page=1`. The page features a navigation menu on the left with options like 'Disassembly', 'Assembly', and 'CREATE/UPDATE'. A tree view under 'Database' shows a hierarchy for 'Tile Calorimeter', including 'Partition', 'Module', 'Super drawer', 'Micro drawer', 'Mini drawer', and 'PPr blade'. The main content area is titled 'PMT Add PMT' and contains a table with the following columns: PMT serial\_number, PMT Block ID, Module, Pos in legacy tilecal, Pos in phase2 tilecal, Beta, HV nominal, QE, Type, Status, Current location, Comment, and Actions. A search bar is located at the top right of the table.

PMT serial_number	PMT Block ID	Module	Pos in legacy tilecal	Pos in phase2 tilecal	Beta	HV nominal	QE	Type	Status	Current location	Comment	Actions
110463					6.849	650	22.6	R11187				
110618					6.838	650	23.5	R11187				
220075					6.639	650	20.6	R11187				
220159					6.719	650	23.1	R11187				
220330					6.903	650	22.9	R11187				
AA0567		LBC31	29		7.133	650.282		R7877				
AA0817					7.199	650		R7877				
AA1160		LBC58	4		7.077	650		R7877				
AA1200		LBA58	8		6.962	650		R7877				
AA1316		LBC58	10		7.06	650.336		R7877				
AA1441		LBC55	12		7.02	650		R7877				
AA1446		LBC49	45		7.086	650		R7877				
AA1519		LBC40	18		6.952	650		R7877				
AA1536		LBA25	1		7.187	650		R7877				
AA1774		LBC51	15		7.099	650		R7877				
AA2933		LBA45	3		7.062	650		R7877				
AA3176		LBA43	25		7.076	650		R7877				
AA3317		LBC47	38		7.133	650		R7877				