Project Charter

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1 Premise

1.1 Company background

Neville Place Assisted Living and Compass Memory Support is an assisted living community located in Cambridge, Massachusetts. It is one of the 17 senior living communities owned by the property management company Senior Living Residences (SLR) and supported operationally and financially by Neville Communities, Inc., comprising of members from the City of Cambridge, the Cambridge Housing Authority, the Cambridge Health Alliance and the Cambridge Affordable Housing.

The focus of SLR is to create service-enriched independent living, assisted living and progressive dementias care options for seniors in New England. Neville Place not only embodies the mission of SLR by embodying their Right Values Principles, but also seeks to enhance the overall-wellbeing and independence for individuals who need support with daily tasks and personal care. Within the community, these individuals receive additional security, companionship and opportunities for recreation and life-long learning. Neville Place offers Compass Neighborhood, a memory support campus that supports individuals with mild cognitive impairment and cognitive decline caused by more progressive brain diseases such as Alzheimers. All of these characteristics combine to make Neville Place a social model of assisted living, as opposed to a medicinal model.

Figure 1: Neville Place Assisted Living.

1.2 The work process

The work process of interest to this project is that involving:

- The assessment of future and current residents physical and cognitive health and social well-being.
- A service plan tailored to each resident.
- The monthly flow sheet.
- Daily assignment sheets meant to direct RCAs on the type of care to deliver.

The condensed version of the process is as follows:

1. Initial assessment
    - Participants: Executive Director/Resident Care Director/Well Nurses + Potential Resident.
    - Goals: Decision to admit potential resident to the facility.
    - Outcome: Preliminary Assessment and Introductory Visit Report.
    - Timing: Once, before the admission.
2. Defining Service Plan
    - Participants: Executive Director/Wellness Nurses/Resident Care Director.
    - Goals: Define services needed to accommodate each resident.
    - Outcome: Service Plan.
    - Timing: After every assessment.
3. Consecutive Assessments
    - Participants: Executive Director/Resident Care Director/Well Nurses + Resident.
    - Goals: Monitoring the state of mental and physical health of current residents.
    - Outcome: Assessment.
    - Timing: Every 6 months (extra - 1 month after residents moving in).
4. Generating Assignment Sheets and Flow Sheets
    - Participants: Resident Care Director/Well Nurses.
    - Goals: Distribution of tasks and resident care associate supervision.
    - Outcome: Assignment Sheet + Flow Sheets.
    - Timing: Every month.

1.3 Data transfer

The main source of knowledge about the residents health is the assessment. It is the base of all the other documents used in the facility. The generation process is as follows:

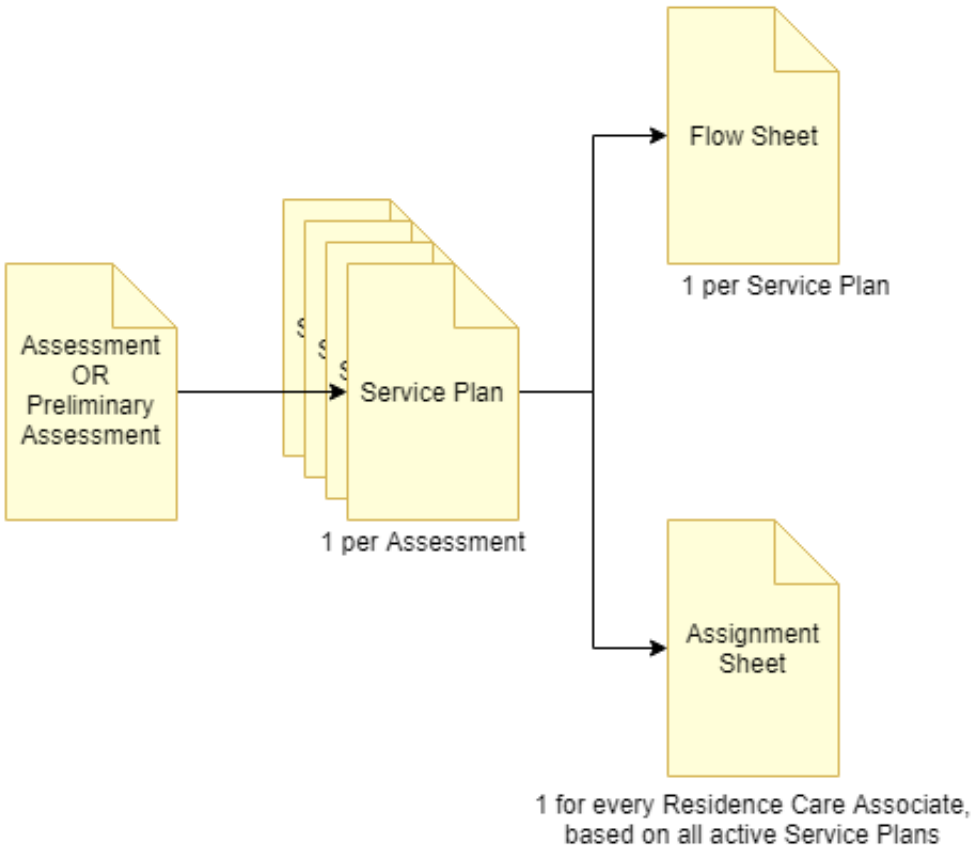

Figure 2: Diagram depicting the flow of documents.

Information between the documents is transferred manually. The service plans are developed by the Residence Care Director or Wellness Nurses based on the facts stated in the assessments. During this mapping, there might occur data loss, as the transfer is subject to the knowledge of the person conducting it. The flow and assignment sheets generation is done with the use of predefined Google Spreadsheets. An overview of each document relevant to the work process is presented in Appendix 2.

1.4 Company resources

1.4.1 Staff

The services provided to the residents are performed across six different, interconnected departments. A figure depicting the employee structure of Neville Place as tied to SLR is provided (3).

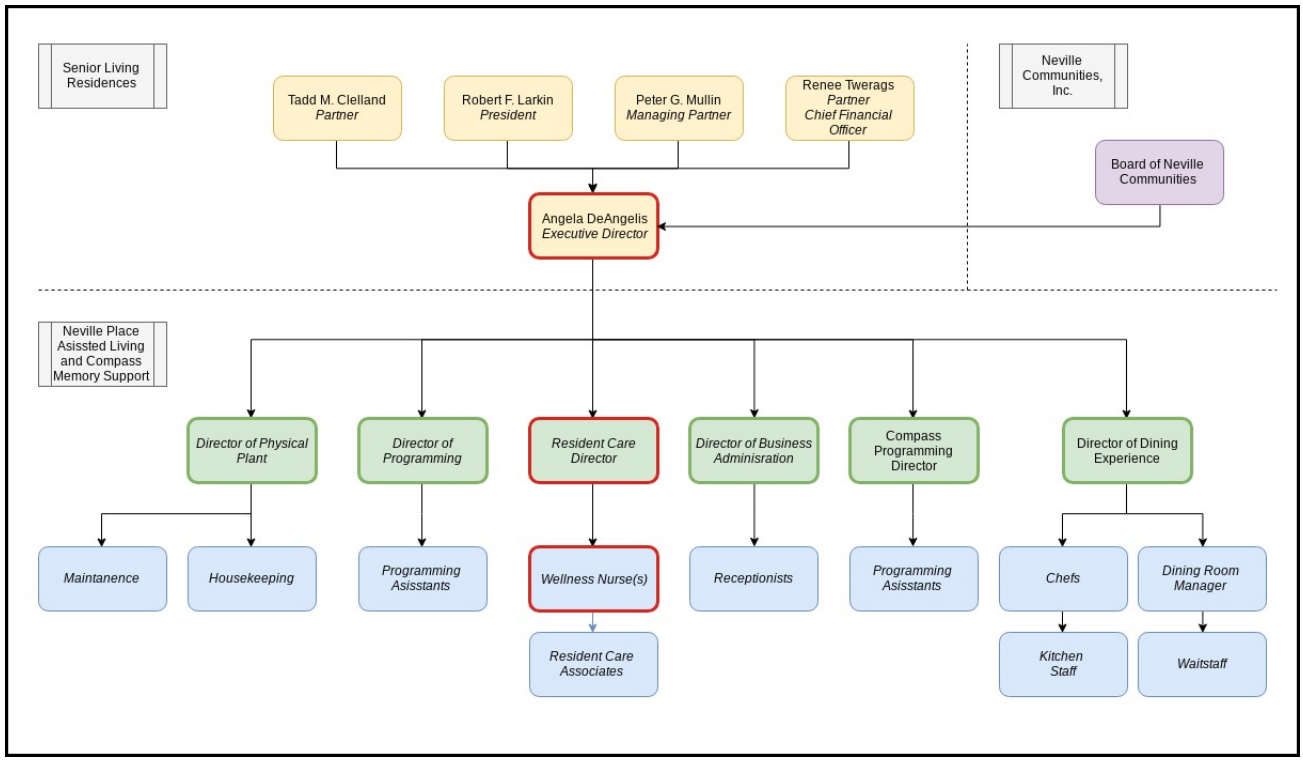

Figure 3: Diagram depicting how SLR is connected to Neville Place Assisted Living.

Presently the residency is staffed with the following who would be using the software:

- ED: 1
- RCD: expected to be filled by mid October
- Wellness Nurses: 2

1.4.2 Technical framework

The staff are provided with three company owned computers for their tasks; one for the ED and two to be shared between the RCD and Wellness Nurses. Each computer is licensed with Windows and Microsoft Suite. Additionally, the staff are equipped with walkie talkies and company owned phones. However, using cellular devices for personal reasons is frowned upon as they are only expected to be used for workplace emergencies.

Neville Place employs an external company, Privo It [https://privoit.com], which monitors and maintains their computer systems and also act as technical support. Additionally, there is

an IT support employee (part of SLR) who deals with problems or questions relating to general use of technology.

While most of their document management is physical, the staff use Google Docs, Google Spreadsheets and Excel sheets to make templates of documents needed to be filled out periodically. For example:

- Google docs is used make a template for the preliminary assessment used for every potential resident by printing it and filling it out during the introductory meeting;
- The RCD and Wellness Nurses manually create the monthly flow sheets in excel. These sheets are to be filled in by RCAs with their initials.

1.4.3 Financial Framework

The current budget of Neville Place does not have an allocated resource for IT solutions (as of 2018). All future IT projects should be specified and included in the budget planning process by SLR before the beginning of new fiscal year.

The maximum amount of money that could be allocated by Neville Place, without the involvement of Neville Communities, Inc. is $10,000. The projects that require more financial resources are to be approved by both SLR and Neville Communities, Inc.

1.5 The problem

All documents within the company, like the assessment and the related service plan, are paper based and never digitized. We can identify two main problems:

- Documents storage.
- Data transfer.

1.5.1 Documents storage

Every document created throughout the residents stay at the community is saved. All of them are stored up to 30 years after the residents pass away or move out. The current place of storage is Neville Place. There following documents are being stored for each resident:

- Assessments: done every 6 months.
- Service plan: done every 6 months.
- Flow sheet: done monthly.
- Assignments: done daily.

The average volume of the following documents after 6 months long stay is ca. 40 pages per resident.

1.6 Assignment and objective

The issue to be addressed with a potential IT solution is reducing paper usage and waste as created by both the assessments and service plans. The potential IT solution must also offer a better organizational, more accessible structure for filing and retrieving these documents.

Provided below is an overview of issues to be addressed with a potential IT solution:

1. Firstly, as a consequence of implementing this system, Neville Place should observe a major decline in their paper usage and waste created by both the assessments and service plans. Furthermore, this should free up storage space and allow the home to repurpose it according to their needs.
2. The system should offer a more accessible and organized structure for filing and retrieving said documents. This will be achieved by providing an overview of all documents for every resident, allowing for CRUD operations on these files by the appropriate staff.
3. It should maintain template files for the work flow process as well as the personal files of the residents (which are the filled in templates).
4. The service plan should be automatically filled with information from the last assessment.
5. The IT solution should implement an effective search engine over the existing files, looking up data such as documents related to potential or current residents.
6. Another aim of the system is to reduce the information loss caused by manually generating the digital assignment sheets from the previously mentioned documents, which are in physical form.
7. Finally, the information stored within the system should be persistent to power outages and secure, as only official, approved personnel should be able to access it.

1.7 Critical factors

The following conditions and goals are required to successfully implement the IT solution:

1. Find a suitable IT solution within an unspecified budget. If the IT solution costs over $10,000 Neville Communities, Inc. must be notified and involved in the process.
2. Find a solution within the end of the year so that Neville Place can present the project to the SLR committee and ask for the funds. This will lead to the approval and implementation of the new solution within next year.
3. Find an intuitive and straightforward solution. This is necessary, as the residence has high staff turnover and every new employee would have to be trained on using the system. The learning curve for the system must be small so as not to impact productivity in a negative way.

Critical preconditions, which if negatively affected or eliminated might jeopardize the project:

1. Change in the ED or RCD position might result in change of attitude towards new IT solution. Good cooperation between the ED and the project group ensures constant progress and high quality.

2 Organization

2.1 Project organization

The following table provides an overview of IT project group and Steering Committee members and their responsibilities (4).

Name	Role	Responsibilities
Kaela DeAngelis	Project manager of the project group.	• Assess state of the project and delegate tasks to project members. • Provide official communication channel with the liaison of Neville Place.
• Andreea Muresan • Hubert Zajac • Marco Ugo G. • Jun Yin	Project group members.	Fulfill tasks delegated by the project manager. Also responsibilities of project manager: • Actively generate proposals for the design project. • Provide results for previously agreed baselines.
Angela DeAngelis	Chairman of steering committee/ liaison of Neville Place. She is the Executive Director of Neville Place	• Responding to inquiries posed by the project group. • Double check information provided by the project group. • Resolve conflicts within the group. • Approve proposals by the project group.

Figure 4: Diagram depicting project group and steering committee members. Included is also responsibilities of all members.

2.2 Stakeholders

We identify the following stakeholders for the proposed IT system:

1. Direct users of IT system
    - Neville place staff: the ED, the RCD and the Wellness Nurses. They will directly use this IT innovation in order to simplify, quicken and reorganize their everyday process, reducing the amount of paperwork therefore also the possibility of losing them.
2. Potential future Stakeholders.
    - If the IT solutions results are efficient and useful it may be a solution adopted also by the other sister communities managed by SLR.
3. Optional
    - People in charge of the technical and organizational implementation. If we want to proceed with a customized IT solution.

3 Method

3.1 Approach

The approach to the IT design project was created based upon the MUST method principles and the techniques and representational tools provided by Participatory IT Design: Designing for business and workplace realities (Bødker et al., 2004). The techniques used and predicted to be used are represented within the baseline Figure 5. For references to the techniques and tools, please refer to the third appendix.

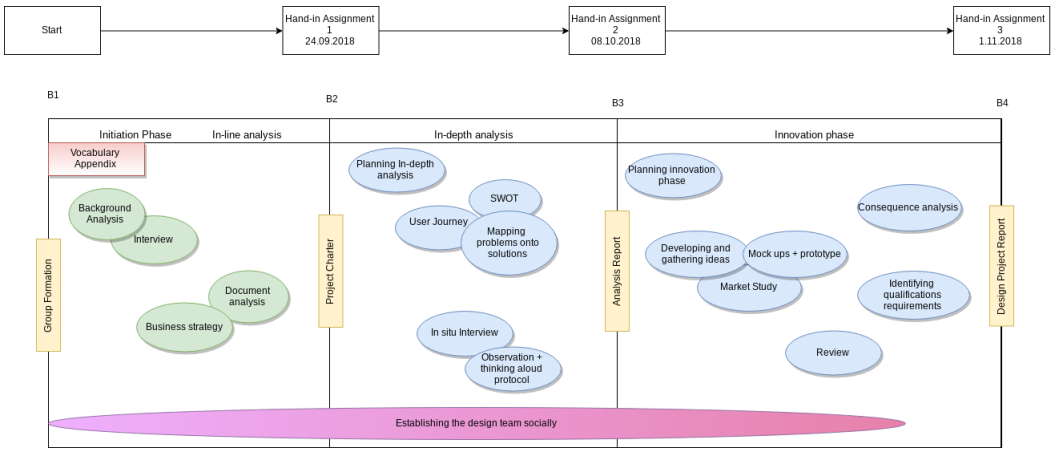

Figure 5: Baseline diagram depicting important dates, expected products, and phase activities already used and expected to be used in future endeavors.

3.2 Plan

In the following diagram we present an outline for the design process which contains milestones and activities to be achieved during the design process:

Activity	Participants	Result of activity
Get overview of business and technical capabilities of Neville Place through document analysis and informal interview with established liaison.	Project group + manager	Background data, user journey.
Create baseline plan for design project.	Project group + manager	Baseline plan and overview of techniques [to be] used.
Investigate critical and risk factors, preconditions relating to implementing a new system in Neville Place and disrupting current work practices.	Project group + manager	SWOT analysis, project charter.
Project manager in-situ visit	Project manager	Recorded and written interviewing, observation.
Analysis of ethnographic data.	Project group	
Investigate of possible existing IT solutions;	Project group	
Suggest custom IT solution designed by project group;	Project group	
Create and present to stakeholders an overview of previous solutions	Project group + manager	Document containing advantages, disadvantages, budget and other requirements i.e. SWOT.
Check in with stakeholders/liaison about vision for IT solution.	Project manager	
Create final overview of IT solutions that fit Neville Place business and IT requirements.		

Figure 6: Diagram depicting the IT project groups plan.

4 Appendices

4.1 Appendix 1: Abbreviations

1. SLR: Senior Living Residences.
2. ED: Executive Director of Neville Place.
3. RCD: Resident Care Director of Neville Place.
4. RCA: Resident Care Associates.

4.2 Appendix 2: Document breakdown

	Assessments	Service Plan/Care Plan	Flow Sheet	Assignment Sheet
Description and purpose	A document containing information about applicants for assisted living communities. This includes the applicant's information (name, age, etc.), medical information, mental and physical status, etc. The information contained in the preliminary assessment will be evaluated in order to decide if an applicant's needs can be satisfied by the assisted living. Assessments will be used to generate service plans.	A document generated according to the information provided in the assessments. The service plan details the care to be delivered to the resident.	Flow sheet acts as a record to confirm that the RCAs fulfilled their duty.	Assignment sheets are used by the RCAs to inform them on what care to provide to the residents they are responsible for.
Frequency	1. Once before moving in. 2. A month of after the move-in date. 3. Every 6 months or as often as needed.	1. Created as often as the assessments are taken.	1. Every month	1. During each shift, assignment sheets are provided to each individual RCA.
Major Participants	1. ED 2. RCD	1. ED 2. RCD	1. RCS 2. RCAs	1. RCD 2. RCAs
Notes	This is a physical document. Responses are recorded with pen or pencil.	This is a physical document. Responses are recorded with pen or pencil.	Generated digitally and printed for use..	Generated digitally and printed for use.

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Figure 7: Overview of documents critical to this project.

4.3 Appendix 3: Plan, Techniques and representation tools

Initiation and in line analysis phase

- Section 9.1, page 217: Baseline plan
- Section 9.4, page 228: Interview
- Section 9.5, page 233: Document analysis
- Section 9.6, page 235: Functional analysis
- Section 9.7, page 242: SWOT analysis

In depth analysis phase

- Section 5.5.6, page 113: Analysis report
- Section 9.8, page 246: In situ interview and observation

Innovation phase

- Chapter 7, page 165: Design Project Report
- Section 7.5., page 179: Market study
- Section 7.5, page 180: Developing and gathering ideas
- Section 9.1.5, page 293: Mock-ups and prototypes
- Section 7.5.5, page 183: Identify qualification requirements
- Section 7.5.6, page 183: Consequences analyses
- Section 7.5.7, page 185: Implementation strategy and plan activity

5 References

Bødker, K., Kensing, F., and Simonsen, J. 2004 Participatory IT Design. Designing for business and workplace realities. The MIT Press.