The authors of this discussion paper call on the UCSD Administration to establish a formal feasibility study committee to develop an intergenerational, mixed-use senior living/learning laboratory on the East Campus. Our working title is:

The UC San Diego
Intergenerational Senior Center

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PART ONE: INTRODUCTION

“It's paradoxical that the idea of living a long life appeals to everyone, but the idea of getting old doesn't appeal to anyone.”

Andy Rooney

Thinking outside of the box has been the hallmark of UC San Diego ever since its inception. That boldness is guided by an absolute commitment to the highest standards in research, teaching, and the public service agenda, and disseminating those findings to the state, nation, and world. That thinking is captured by the recent “Strategic Plan” adopted by the campus that serves as the defining statement of character propelling our $2B capital campaign. In this discussion paper, we propose that UC San Diego continue its “non-tradition” by investigating the establishment of a senior living-learning community on campus. We envision this community as a “Living Lab” for research and innovation in healthy aging and intergenerational community design.

Campus discussions about a senior residence at UC San Diego date back decades. Interests have intensified over the past dozen years at the urging of campus organizations such as the UCSD Emeriti and Retirement Associations, as well as numerous local campus/community groups like the UCSD Osher Lifelong Learning Institute. The dilemma of human aging that Andy Rooney humorously points out is the serious focus of the multidisciplinary UCSD Center for Healthy Aging.

The authors of this discussion paper are senior faculty and administrators who average more than thirty years of active full-time service to UCSD, including appointments as college provost, department chair, associate vice chancellor, academic dean, center director, campus architect, head of Housing, Dining, and Hospitality, and a recent Revelle Medal recipient. Our group met regularly for the past year in order to better educate ourselves on the issues of healthy aging from the standpoints of health care, science, technology, community development, human socialization and wellbeing.

We invited developers and managers of senior facilities to our meetings to share their experiences in this fast-changing industry (see Appendix IX for a listing of our consultants). We discovered that many for-profit and not-for-profit companies are enlightened by a philosophy and social agenda that closely mirrors the principles ensconced in the Strategic Plan for UC San Diego.

The intergenerational features proposed in this paper are “nontraditional.” Intergenerational community programs connect older adults to younger generations in an effort to bridge the gap between different generations and provide opportunities to share and grow with one another. There is considerable evidence supporting the benefits of intergenerational community programs not only for older adults, but also for the younger participants, as well as the overall community. UC San Diego will become a leader in intergenerational programs by creating unique opportunities for older adults to interact with and complement the efforts of the Early Childhood Education Center, Preuss School, as well as undergraduate, graduate, medical students, and faculty housed nearby.

1 https://healthsciences.ucsd.edu/research/aging/Pages/default.aspx
2 Generations United, “The Benefits of Intergenerational Programs” http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&mid=606
The authors also recognize the strong need for on-campus faculty and student living areas, and this proposal integrates with and supports these efforts through the development of an intergenerational living community on the East Campus. We envision potential economies of scale if this structure were built in conjunction with a structure for new faculty housing. We also offer observations in the Appendices on how synergies might be achieved.

Conceived as a public/private partnership (PPP), the UCSD Intergenerational Senior Center (ISC) is envisioned as a state-of-the-art home to a stable, diverse, and engaged community of aging residents benefitting from the application of the best research-based practices in healthy aging developed here at UC San Diego and elsewhere. ISC based research results will serve to revise common cultural and medical attitudes about aging. Instead of merely managing deterioration, the ISC will promote a better social integration and medical understanding of what it means to prepare for and sustain a meaningful, productive, and healthy life. Moreover, the UCSD ISC should lead the shift from a historic “anti-aging” focus to an enriched appreciation of the values of lifelong learning, public service, and change.

**PART TWO: THE NEED**

The emergence of the Baby Boomer generation today (ages 51-69 in 2015) and the lengthening lifespan of the average American are changing the face of health care, national economic stability, and the social contract in America. With proper monitoring of physical activities, targeted nutrition, psychosocial stimulation along with necessary healthcare and social support, successful aging can be enhanced and studied. As quality of life improves, it is expected that the wave of aging population will be able to contribute more to society, have increased interaction with younger generations, and have decreased healthcare costs relative to their demographic.

Our own retired faculty, staff and alumni are also expected to live longer and contribute significantly to society. In a recent survey of UC Emeriti activity during the years 2012 - 2015, 940 out of 1619 respondents (58%) reported producing an average of over 5 journal articles per person over this period, and 501 (over 30%) reported significant artistic accomplishments. These Emeriti also reported teaching over 800 undergraduate and graduate classes over the period, the equivalent of 335 full time faculty. Nor did their campus and community service lag: 45% reported mentoring activities, 44% engaged in campus service, and 46% were involved in community service. Indeed, system-wide, the emeriti have been viewed as a virtual 11th campus of the university. Fostering the active engagement of retirees in a campus ISC provides a significant resource for UC San Diego.

While a more formal market survey is recommended before going forward on this proposal, it has been clear from our consultations with industry professionals and public forums held by the Center for Healthy Aging and the UCSD Retirement and Emeriti Associations that there is enormous public enthusiasm for a research-based senior center. It is widely believed that when UC San Diego sets its mind to address a problem, good things happen. The authors of this plan couldn’t agree more!

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PART THREE: PROJECT DESCRIPTION

We encourage further detailed study of the development of a mixed-use, financially self-sustaining, intergenerational senior living/learning community on East Campus (see campus map in APPENDIX VIII) at UC San Diego. We envision a unique version of a university-affiliated Continuing Care Retirement Community (CCRC) with independent living, assisted living, memory care, and skilled nursing components. The ISC will offer active seniors participation in a multi-generational community that caters to their specific aging needs while also embracing the continued vitality and contributions of retirees.

INTERGENERATIONAL ENGAGEMENT: While specific activities would depend on the changing interests of participants, we envision a wide range of organized ISC activities that would bring generations together, each learning from the other. Intergenerational music or theatre ensembles could practice together regularly and occasionally perform. Intergenerational book or creative writing or journaling groups could meet regularly in the library. Residents could build and maintain a joint community garden with students, faculty and staff and their families. Free intergenerational Movie Nights could be held monthly. Those interested in the arts could teach or learn from others in the joint arts studio or music room. The talents and experience of our retirees and Emeriti could be shared in informal seminars with graduate or medical students on topics such as the history of their field, or their experience in starting a business. Students savvy in technology could give occasional sessions for residents wanting to improve their access. International students could practice and improve their English-speaking skills and bridge cultural differences by interacting regularly with senior residents. Seniors could serve as mentors for undergraduate students, help them work towards clarity in their career choices, or tutor them in a specific subject. Residents could also serve as volunteers in working with young children, or volunteer to be mentors or tutors in math or science at the Preuss School. Organized environmental service projects would bring together residents and the local community. All participants will benefit by forming relationships with those with experiences different from their own.

LOCATION: With a prime, walkable location on the UC San Diego East Campus, the ISC is more than just a building; it is an opportunity to create a dynamic community that will vitalize the East Campus and address all aspects of successful aging. Cutting edge design and partnerships with the university, UCSD Shuttle services, medical services from nearby University Hospitals and clinical services, shopping at the recently renovated UTC mall, and city-wide access with the arrival of the mid-coast trolley stop, will attract residents from all over San Diego. It is our expectation that the ISC would have additional shared facilities available for campus-wide and possibly community uses including a fitness center, campus-sponsored physical and occupational therapy, a community garden, art studio, class/lecture rooms, a small auditorium, and a 24/7 café. The authors recognize that faculty and staff housing has been a critical need ever since the inception of the campus. Therefore, the potential for creative integration with and support of East Campus Faculty/Staff housing would be an important contribution of the ISC as part of a larger intergenerational living/learning community. The proposed development of the East Campus with new retail, educational and wellness facilities will offer active seniors the opportunity to be part of a multi-generational community that caters to their specific aging needs while also embracing the continued vitality and contributions of retirees.

Our interviews with leading builder/operators of senior facilities revealed that one of the most attractive features of recently built retirement communities is an association with a nearby institution of higher
learning. In the last decade, successful and profitable senior communities have sprung up on or near Duke University, Notre Dame, Cornell, Dartmouth, University of Texas, University of Florida, Oberlin College and other prestigious campuses. Presently, Belmont Village LP operates senior communities near and closely associated with UC Berkeley and UC Los Angeles (http://www.belmontvillage.com/). A mixed-use project at UC San Diego could also use this “college campus” model, with innovatively designed housing and healthcare in state-of-the-art, technology-savvy environments. We foresee a variety of important synergies between UC San Diego’s Qualcomm Institute, working in collaboration with the Design Lab, directed by Dr. Don Norman, and the Center for Healthy Aging, to design residences that utilize cutting-edge technology to maximize safety and comfort.

The suggested location on East campus also offers unique intergenerational programming opportunities with nearby multi-cultural and multi-generational educational organizations such as UCSD’s Early Childhood Development Center, graduate and undergraduate student housing, the Lawrence Family Jewish Community Center, Preuss School, and La Jolla Country Day School.

The ISC community would support the traditional missions of the university, namely- research, education, and service.

RESEARCH: We have the opportunity to create a university-affiliated senior living facility that will allow longitudinal data collection as well as investigation of behavioral, biological, and technological interventions to promote healthy aging. As a “Living Lab” the ISC will provide measurable outcomes and help to establish UC San Diego as a leader in the study of wellness, healthy aging, and intergenerational programming. This facility will give residents the opportunity to participate in research studies that may be of interest to them – as patients, as consultants, or in other capacities. For example, residents could participate in studies of “brain health” technologies or nutritional supplements or robotic companions. They could participate in research studies investigating the value of specific intergenerational programs, or participate in one of hundreds of clinical trials investigating everything from Alzheimer’s disease and breast cancer to varicose veins and weight loss. Further description of current relevant research activities can be found in APPENDIX I.

EDUCATION: The location of the ISC on East campus affords many new educational opportunities and would strengthen current efforts. UCSD undergraduate, graduate and medical students can all benefit from the proximity. Most disciplines on General campus as well as the instructional mission of our teaching hospitals would benefit. For example, medical students could make use of the “Living Lab” and continuity of relationship with members of the ISC to further their expertise. Students in the arts departments could preview new works; students in Engineering could work on real-world entrepreneurial projects that would benefit residents and society as a whole. Specifics of how current educational endeavors can be augmented through the ISC can be found in APPENDIX II.

SERVICE: The emphasis of Public Service as a key ISC value and basis for intergenerational activities is another “nontraditional” and unique aspect of this project. As part of a larger intergenerational living/learning community on the East Campus, the ISC would become the organized locus of student mentoring and tutoring instructional services by retirees. Further, residents would be encouraged to give courses and lectures, both at the university and for the public. Organized service projects in the greater San Diego community would in addition bring together residents and a range of individuals of different ages and backgrounds with a common interest in community service. In addition, given its close
proximity, the ISC will have a direct synergy with the mission of UCSD’s Health System: outstanding healthcare delivery and community involvement.

**PART FOUR: CONCLUSION**

The creation of the Intergenerational Senior Center on East Campus is an actionable initiative that serves multiple strategies found at the core of the UC San Diego Strategic Plan:

- “Strengthen the connection between academic and high-impact co-curricular experiences
- Expand existing programs and implement new approaches that result in accessible and affordable learning for all
- Identify emerging and future trends and strategic thrusts to increase our impact and enrich society
- Attract, retain, and grow our top-quality and diverse faculty body
- Grow a high-quality, cost-effective and diverse graduate program
- Evolve structures and processes to identify trends for investment, and foster innovation, risk-taking, and collaboration
- Strengthen community engagement and public service to increase the greater community’s awareness of UC San Diego’s impact role locally, regionally, and globally
- Improve access to high-quality patient care
- Enhance financial sustainability through new revenue and efficient use of existing revenue
- Identify new models for excellent service that prioritize delivery to our stakeholders while addressing regulatory, compliance, and reporting requirements”

In **APPENDIX I** we expand on research synergies, and in **APPENDIX II** on educational synergies. In the remainder of the Appendices, we give further practical details on the project that emerged from our study: Comparative Approaches (III), Admissions Priorities and Operations Cost-sharing (IV), Design and Construction (V), Finance (VI), and Facility Description (VII). **APPENDIX VIII** provides a map of current East Campus plans, and **APPENDIX IX** lists the outside consultants and our acknowledgements.

Campus administrators have proven experience and expertise in working with specialized consultants in supervising the construction of buildings for particular needs. Prior to their involvement, however, we are urging campus leadership to establish and charge a feasibility study group to vet plans to establish the UCSD Intergenerational Senior Center (UCSD ISC) as a fundamental element of an intergenerational living/learning community on the East Campus. Members of our group stand ready to assist the campus leadership in advancing the establishment of an Intergenerational Senior Center.

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5 Defining Our Future: UC San Diego’s Strategic Plan, [http://plan.ucsd.edu/](http://plan.ucsd.edu/)
APPENDIX I: RESEARCH

The UC San Diego Intergenerational Senior Center would be closely associated with ongoing faculty research and be the subject of future research proposals. We have the opportunity to create a university-affiliated senior living facility which is intended to be a “Living Lab” that would allow longitudinal data collection as well as behavioral, biological, and technological interventions to promote healthy aging. This facility will give residents the opportunity to participate in research studies that may be of interest to them – as patients, as consultants, or in other capacities. UC San Diego researchers are always looking for study volunteers, and older adults like to volunteer their time and give back to the research community. With UC San Diego being ranked 5th in the nation for research funding, there are numerous opportunities for residents to become involved in the latest research. For example, residents could participate in studies of “brain health” technologies, nutritional supplements, or robotic companions. They could receive free treatment to help give up cigarettes as part of a smoking-cessation study, or participate in one of hundreds of clinical trials investigating everything from Alzheimer’s disease and breast cancer to varicose veins and weight loss.

Below are some examples of the diverse portfolio of interdisciplinary research projects already underway at UC San Diego. These and many future projects could be easily integrated into the “Living Lab” concept including:

1) **Extending Older Adults’ Ability to Drive Safer and Longer** (Quantifying the Impact of Aging on Visuospatial Cognition, Navigation, and Driving Ability Using Virtual Reality Paradigms.)

Principal Investigator: Akram Belgith, PhD. Driving a vehicle is an important symbol of independence, competence and social connection for older adults. Scientists across several departments at UC San Diego, including Ophthalmology, Family and Preventive Medicine, Biological Sciences, and Psychiatry want to help older adults retain their car keys longer by developing interventions that promote safe and independent driving throughout the aging spectrum.

2) **Using Smartphones to Enhance Cognitive Functioning for Older Adults** (The Development and Test of Daily Neurorehabilitation Training Mobile Apps for Healthy Aging.)

Principal Investigator: Jeng-Ren Duann, PhD. Researchers from UC San Diego’s Institute for Neural Computation, Jacobs School of Engineering and Biomedical Informatics will develop new training applications for mobile phones that aim to improve healthy cognitive functioning for older adults. Tracking the performance that these brain training activities will benefit all older adults, particularly those with Alzheimer’s and dementia.

3) **Increase the Lifespan of Older Adults with Mental Health Diseases** (Global Analysis of Age-Related Changes to Peptide/Protease Signaling in Those With and Without Schizophrenia Using Participant-Derived, Age-Preserved Induced Neurons.)

Principal Investigator: Anthony O’Donoghue, PhD. In order to improve health and well-being of older adults with diseases of accelerated aging such as schizophrenia, more research is needed to understand the cellular and molecular underpinnings of human brain aging. By comparing brain profiles of those
with and without schizophrenia, scientists from UCSD’s departments of Pharmacology, Psychiatry and Biological Studies hope to extend the expected life expectancy for adults with mental health diseases.

4) **DNA Modification + Healthy Lifestyle Choices = Increased Life Expectancy?** (Age-Related Alterations in 5-Hydroxymethyl Cytidine Levels and Their Impact on Human Physiology.)

Principal Investigator: Dorota Skowronska-Krawczyk, PhD. We know that aging is associated with a gradual decline in the efficiency of molecular processes and deterioration of cell functions but we have not studied how modifications in DNA may alter the course of aging. Scientists from UC San Diego’s departments of Ophthalmology and Bioengineering will study the links between DNA modifications as well as diet and lifestyle choices to provide the basis of new anti-aging therapies.

5) **Promoting Wisdom throughout the Lifespan.** (Does Wisdom Predict Brain Activation Patterns Associated with Moral Decision Making in Younger and Older Adults? A Psychometric-Neuroimaging Study.)

Principal Investigator: Michael Thomas, PhD. Research shows wisdom is associated with better health and quality of life among older adults but few studies have examined the validity of wisdom measures using objective functioning, especially brain functioning. Researchers from UCSD’s departments of Psychiatry, Biosciences and Pathology will use their findings in this study to develop interventions that can teach or enhance wisdom throughout the adult lifespan and facilitate successful aging.

6) **Reduce Life-Threatening Pressure Ulcers for Older Adults.** (Nanocomposite Fabric Sensors for Preventing and Mitigating Pressure Ulcers in the Elderly.)

Principal Investigator: Sheng Xu, PhD. Pressure ulcers take the lives of 60,000 older adults each year and cost the U.S. $11 billion per year. Scientists from UC San Diego’s departments of Nanoengineering, Structural Engineering, and Geriatrics will come together to develop an innovative low-cost pressure mapping system that aims to prevent, monitor and mitigate pressure ulcers for older adults while greatly reducing the fiscal impact that these life-threatening wounds have on the country’s healthcare system.

7) **Bridging Generations. The Life Course Scholars Program.** Leslie Lewis, PhD.

The Life Course Scholars (LCS) program launched in 2015 successfully created an interdisciplinary, cross-generational, multi-site learning experience for UC San Diego undergraduates that transforms students’ understanding of aging, health, learning & research, and connects them more deeply to the “people and places” of surrounding San Diego communities.

8) **Design Competition to Improve the Quality of Life of Seniors**

Principal Investigator: Truong Nguyen, PhD. Through a team approach, series of workshops, one-to-one feedback sessions and interactions with seniors in the local community, UC San Diego undergraduate students will incorporate what they have learned about aging and the needs of seniors into a useful and meaningful device or platform that improves the quality of life for older adults. Although the design competition is open to all UC San Diego undergraduate students, at least one team member must be from UCSD’s Jacobs School of Engineering and another from the Division of Social Sciences. The
impact on the students is transformative as they gain invaluable knowledge on aging issues, develop empathy and connection toward older adults in the community and increase their interest in pursuing careers that advocate for older adults.

We also note that the new IBM and UC San Diego Artificial Intelligence for Healthy Living Center (AIHL) plans to use Artificial Intelligence techniques to research healthy aging and to use technology to apply its findings. The center Co-directors are Professors Tajana Rosing and Rob Knight, and the leaders of the Healthy Aging Project in the Center are Professors Virginia de Sa and Laurel Riek.

Similarly, there are synergies with campus units and experts in technology and design. UC San Diego’s Qualcomm Institute, working in collaboration with the Design Lab (Director: Don Norman, PhD) and the Center for Healthy Aging, would help to create homes that utilize cutting-edge technology to maximize safety and comfort. The mixed-use project would incorporate the latest design standards for sustainability and “aging in place” residences that allow residents to stay in their homes as they age and as their abilities and needs change with time. Some of the innovative design elements include:

- Wider doorways and easy-reach storage
- Low-maintenance finishes in bathrooms and kitchens
- “Flexible rooms” that allow floor plans to be modified to accommodate changing needs
- LED lighting along floors and hallways
- Smart-home sensor technology that can monitor for falls, check for bed rest, detect malfunctioning appliances, and make emergency calls in times of distress
- Use of robotic systems (e.g., iRobot vacuum cleaners) and machine learning to provide support for residents doing everyday tasks and to engage them in exercises to safeguard or enhance cognitive skills
- Healthcare room will provide a footprint for home health care monitoring and tele-health technology.
APPENDIX II: EDUCATION

UC San Diego undergraduate and postgraduate students, including those planning careers in the health sciences, psychology and engineering, will find many areas of pre-professional involvement. In many cases, this involvement will enhance the experience of established courses and health outcomes for residents. We have learned through our campus interviews that students in the arts departments would welcome such a venue to preview musical and theatrical performances and art exhibitions. Informed residents of the ISC would be available to provide mature perspectives on curricular activities relevant to aging.

Because of proximity and shared interest, the instructional mission of our teaching hospitals and most disciplines on the General Campus would be enhanced by the presence and participation of residents of the UC San Diego ISC. For instance:

- Trainees in medicine, nursing, pharmacy and engineering could establish continuity relationships with elderly residents at the facility and thereby gain perspective on such issues as living with chronic illnesses and use of assistive devices.
- Home visits for all levels of trainees in geriatrics are a critical supplement to their education, are challenging to implement, and would be greatly facilitated.
- ‘Real life’ medical-functional evaluations by medical students of the elderly is a component of third year core courses (Primary Care 401, MED 410) or fourth year (MED 452) electives, and would be facilitated.
- Students in their fourth year at the UC San Diego Skaggs School of Pharmacy and Pharmaceutical Sciences would perform on-site evaluation of the pharmacotherapeutic regimens of geriatric patients as a component of the required Advanced Pharmacy Practice Experiences course.
- UC San Diego, in collaboration with San Diego State University, provides advanced degree nurse practitioner students and social work students training in geriatrics that would benefit from an on-site residential facility.
- Students in Theater or Music Departments might have mutually beneficial interactions with residents through regular weekly open rehearsal sessions or periodic interactive performances at the resident facility.
- The education of Psychology students pursuing a BS in Human Health would be enhanced by applied learning opportunities.
- Engineering students, collaborating with older adults, would address engineering innovations that concern relevant health care, housing, or medical devices. Courses or areas that are relevant include: ENG 100D; BENG 187; and the Center for Medical Device Technology (CMDT).
- Undergraduate or graduate students of design could get first hand design experience related to healthy aging. Relevant courses include many from Cognitive Science, Computer Science, and Communications (for example, COGS 120/CSE 170 Interaction Design, COGS 160 Interaction Design Research, COGS 198 Redesign UC San Diego, CSE 170/COGS 120 Introduction to Human–Computer Interaction Design, CSE 216/COGS 230 Interaction Design Research, COMM 102c Practicum in New Media & Community Life, COMM 111d Critical Design/Intermediate Studio) and the Sixth College Practicum courses, CAT 124s/CAT 198s.
Exposure to older adults would also benefit the Medical Student Training in Aging Research (MSTAR) in which students receive full time training in an area of personal interest pertaining to aging or age-related disorders.

Scholars of all types would have the opportunity to give talks to educated lay audiences. Trainees who would benefit are enrolled in programs that include: the Clinical and Translational Research Institute (CTRI, KL2 Seminars); National Center of Leadership in Academic Medicine (NCLAM) program for junior faculty. Young faculty and postdoctoral scholars from all disciplines could practice and receive feedback on their research presentations.

These instructional ideas are already present on our campus. The UCSD Center for Healthy Aging already runs intergenerational learning programs. The High School Summer Training in Aging Research (HS STAR) program provides exceptional underrepresented high school students from San Diego exposure to daily activities in aging research. As well, exposure to older adult residents of an intergenerational community will be an important component of this program.\(^6\) It is our expectation that UCSD’s HS STAR would be folded into and expand both the educational and service agenda of the ISC.

\(^6\) HS STAR [https://healthsciences.ucsd.edu/research/aging/training/Pages/For-High-School-Students.aspx](https://healthsciences.ucsd.edu/research/aging/training/Pages/For-High-School-Students.aspx)
APPENDIX III: COMPARATIVE APPROACHES

In this section, we briefly describe and compare the current types of residential models among senior communities in the United States. They are: Continuous vs. Limited Care, For Profit vs. Non-Profit, Entrance Fee vs. Rental, Campus Affiliated vs. Non-Affiliated, and Urban vs. Suburban.

Continuous Care vs. Limited Care
Continuing Care Retirement Communities (CCRC’s), also called Life Plan communities, typically provide four levels of care:

- Independent living (IL) where residents do not require regular help with daily living but choose to live in a private residence in the community to partake of its activities and amenities
- Assisted Living (AL) where residents require a degree of assistance (for example, medication management, bathing, grooming, dressing, or routine injections by an RN) but continue to live privately in a separate residence while receiving such assistance
- Skilled Nursing (SN) provided on a 24-hour basis for residents facing debilitating illnesses or needing short-term nursing assistance
- Specialized Memory Care (MC) in a highly structured environment for varying degrees of dementia and Alzheimer’s disease.

Life Plan communities encourage entry at the IL level, tend to have younger, healthier residents, and can guarantee the continuum of care at a monthly cost that does not increase drastically with care level. They also have the advantage that even if one partner needs more care, both residents can stay within the community for life. Kendal (http://www.kendal.org/) is a non-profit system of Quaker-inspired Life Plan communities, and Kendal at Oberlin is an excellent example that also stresses intergenerational activities. A different model is provided by limited care facilities which offer some but not all of the services of a Life Plan community. Belmont Village (http://www.belmontvillage.com/) is a for-profit developer, owner and manager of multiple communities. Belmont Village at Albany near UC Berkeley was developed in conjunction with campus, and offers AL, with limited IL and early MC. As a resident’s needs increase, monthly fees increase as well, and finances can force an individual to leave the community.

For Profit vs. Non-Profit
There is a full spectrum of Life Plan communities, from For-Profit, Joint For-Profit-Non-Profit LLC’s, to fully Non-Profit. An example of a fully for-profit local Life Plan community is the high-priced Vi at La Jolla Village (https://sandiego.viliving.com/). Vi is of interest as it is located close to the UC San Diego campus and has attracted many of our retired faculty, hence would be a competitor. For-profit communities may be fully owned by the developer, or built on leased land by the developer. For-profit communities may be publicly held (thus answering to stockholders), or privately held. The Kendal communities are fully non-profit. Many such communities are foundation-based and/or owned, and can offer help if a resident can no longer afford care; this could also be a mechanism for offering reduced entrance fees for lower income residents. Some communities use a hybrid of the two extremes: one

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7 We found that the industry’s most varied and overlapping levels of care are assisted living (AL) and skilled nursing (SN). We recommend that UCSD should explore a growing trend in senior care to merge some features of skilled nursing with assisted living services.
such example is Splendido Tucson (https://splendidotucson.com/), owned by an LLC partnership between non-profit Mather LifeWays and for profit Plaza companies. Mather LifeWays operates the facility, and its share of profits can be used by its non-profit foundation to support its mission.

One-Time Entrance Fee with Monthly Charges vs. Month to Month Rental
Life Plan communities traditionally have used a one-time entrance fee, usually based on square footage and location, with an additional fee for sharing the residence. Some of this entrance fee can be returned upon leaving the community within a limited time period. For example, Vi at La Jolla Village offers three entrance fee options of increasing cost, with 0%, 40%, or 80% return. Monthly charges can increase annually, but (except for extra meals) are the same for all residents despite the level of care required. Entrance fees have often been used to finance building development, and construction typically does not start until a given percentage of units are full. An example of a new Life Plan community in San Diego using this model, currently under development, is The Glen at Scripps Ranch (http://www.theglenatscrippsranch.com/). Most communities using this model perform a financial analysis before a resident is accepted into the community.

At the other end of the spectrum, rental Life Plan communities require only a small initial deposit and charge monthly fees. Higher levels of care increase the market-generated monthly fee. An example is non-profit Ecumen’s St Mark’s Senior Living (http://stmarksliving.org/). This model has the lowest upfront cost, but has greater financial risk for the resident.

Life Plan Communities often offer multiple types of entry fee contractual arrangements to increase financial flexibility for residents. These include: the traditional full life care; a second option, modified fee for services, which after a certain limit charges additional fees for services beyond IL; and a third model that always charges higher market-level fees above the IL level. The first and third contract models are increasing in use while the second option is decreasing in use.8 (The second model, however, may be of more interest to residents who already carry long term care insurance.)

Campus Affiliated vs. No Campus Affiliation
Many Life Plan communities that are located near a college campus have some campus affiliation, ranging from loose (University Retirement Community, http://www.retirement.org/davis/) to strong (Kendal at Oberlin). Most use the university community as a base for potential residents, and give them an admissions priority. Vi is a Life Plan community with no campus affiliation.

Urban vs. Suburban
CCRC’s can be located in urban, high rise buildings, or in suburban locations with some separate single residences spread out over a larger area. An example of an urban community is the Mather (https://www.thematherevanston.com/) in Evanston. An example of a more suburban or rural senior community with larger acreage is the Forest at Duke (http://www.forestduke.org/).

Staffing and Management
There are different options for staffing and management of the facility, ranging from totally staffed by UC San Diego to totally staffed by a management company with established experience in this area (as well as various intermediate variants). Management services, medical and nursing services, dining and

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recreation services could all be managed and staffed in different ways, as dictated by a variety of considerations.
APPENDIX IV: ADMISSIONS PRIORITIES AND OPERATING COSTS-SHARING

The facility and services must be, minimally, financially self-sustaining. In order to plan and cover the anticipated eventual costs for continuing care, we recommend an “entrance fee” and “refund” scheme prevalent in the senior community industry. One example we studied in depth is taken from Kendal Living Communities [http://kao.kendal.org/living-options/independent-living/fees-finances/](http://kao.kendal.org/living-options/independent-living/fees-finances/). Many senior builder/operators have Entry and Monthly fees that are based on type of contract, size of residential unit, and whether single or double occupancy.

While we see some negatives associated with the model used by the Belmont Village near the Berkeley campus, its admission policy provides a possible starting point. The minimum entry age is 65 years old. Translating their admission priorities to the UCSD context might look something like this:

- Priority #1: UCSD faculty and staff retirees
- Priority #2: UCSD Alumni
- Priority #3: Parents of UCSD retirees, alumni, or active UCSD faculty and staff
- Priority #4: 5-year members of the Chancellor’s Associates
- Priority #5: Other community members as may be mutually agreed upon by the ISC management and UCSD

One plus of this system is that, like child care, it may prove a possible recruiting tool for new faculty and staff by providing a potential landing place for their elderly parents. An overall problem with the Belmont priority system is that it appears to be lacking a way of achieving diversity of residents, and this needs to be addressed.
APPENDIX V: DESIGN AND CONSTRUCTION

The design and construction of a UCSD Intergenerational Center could be accomplished under several different delivery models. The selected delivery model would most likely be one of the following:

- **Traditional Design-Bid-Build**
  This typically involves three sequential project phases: The design phase which requires the services of an architect for architectural programming, complete plans and specifications setting forth directions in enough detail to enable a contractor to carry them out; the bid phase when a qualified contractor is selected as a result of being the lowest responsible bidder; and a build or construction phase when the project is built by the selected lowest responsible bid contractor for a specified fixed sum price.

- **Design-Build**
  In the design-and-build contracting mode (also called the "design-build" or "turnkey" mode), the University contracts with a single party that designs and builds the project. The design-build delivery methodology can have permutations that include a design competition as part of the solicitation of design-build contractor. This process affords the opportunity to evaluate design options as part of the process. However, the design-build delivery methodology requires a significant amount of front-end work to adequately articulate the proposed scope of work for the project so that the design-build contractor knows what the project will be required to incorporate. Documents for the solicitation of bids under the design-and-build contracting mode include the following:

  - A program setting forth the project scope and the size, type, and desired design character of the building and site.
  - A set of performance specifications covering the quality of materials, equipment, and workmanship.
  - A maximum acceptance cost.
  - A method and grading system for evaluating contractor proposals on the basis of a preliminary design, outline specifications, a price, and the financial condition and relevant experience of the contractor and the contractor's design professional.

- **Public-Private Partnership**
  In this methodology (also called P3 and PPP), the University solicits interest from the private sector, most often through the affiliation of a developer, to undertake the completion of a project. The arrangement of the P3 process can be beneficial as it can be used as a way to also finance a project, with the developer taking on the responsibility for financing the project using ground leases, option to purchase, and other real estate transactions.

  To succeed, projects delivered under a PPP, especially programmatic projects, require a well thought through “Basis of Design” document (BOD) that delineates design specifications and operating parameters. Also critical is a thoroughly vetted set of transaction documents that effectively represent both parties’ interests. Another advantage of P3 is that as a part of the contractual real estate arrangements with the developer, an operator entity can be included in the proposal. In other
words, the developer can bring a seasoned senior living operational management company into the contract. Previous variants of UC public private partnership transactions are as follows:

- Ground Lease (auxiliary use, third party users)
- Ground Lease-Leasebacks (programmatic use, UC is the user)
- Developer Build-to-Suit for purchase by UC on completion (also known as Turnkey projects)
- Variants on Ground Lease-Leasebacks and Developer Build-to-Suit projects unique to UC (Space for Lease and Donor Development transactions respectively).
- Master Lease or Lease with Option to Purchase.

The project delivery models discussed above are not meant to be an exclusive list. There are variations and permutations to the project delivery models and the selected methodology will be greatly dependent upon University financing objectives.
APPENDIX VI: FINANCE

The University of California recognizes and utilizes several methods of funding and financing capital improvement projects. It is expected that the UCSD ISC will be financially feasible as the debt service or lease payments will be made, in large part, from the revenue stream derived from the clients who will rent retirement units in the facility. Typically, sources of funding and financing for University capital improvement projects can be derived from some of the following sources, either singularly or in combination of the following.

- Debt Financing where the assets of the University are pledged as collateral to repay long term debt through a loan
- Gift Funds where private philanthropy is engaged to provide funding for capital improvement projects
- Campus discretionary funds
- Developer based project, Public Private Partnership – P3, where the developer takes the responsibility to procure financing. The University enters into a real estate transaction to provide a ground lease, or similar agreement, to the developer. The ground lease is set for a defined period of time at the conclusion of which, the asset is then turned over and becomes the property of the University.

The authors recognize that faculty and staff housing has been a critical need ever since the inception of the campus. Therefore, the potential for creative integration with and support of East Campus Faculty/Staff housing would be an important contribution of the ISC as part of a larger intergenerational living/learning community. Consequently, we are in favor of allowing the residential fees to be set in such a manner to help subsidize the inclusion of newly arrived junior faculty as it is assumed that their salaries would not likely allow the campus to fully recoup its capital and operating costs for younger faculty. In addition, the campus could use land lease income as well to help finance faculty/staff housing on East campus. Sensitively integrating the UCSD Intergenerational Senior Center with the inclusion of full-time active newly-arrived younger faculty and their families on the East Campus furthers the possibilities for intergenerational programming that are at the core of the ISC’s purpose. Considering possible synergies here, at the outset, would allow for cost-sharing and ensure that the intergenerational living and learning community on the East Campus is self-sustaining and viable. The formal feasibility planning committee that are requesting should have the staff and professional “know how” to sort through the financing of collaborative ventures.
APPENDIX VII: FACILITY DESCRIPTION

The development of the UCSD Intergenerational Senior Center must be planned in concert with neighboring facilities in what we are calling, an intergenerational living and learning center on the East Campus. As such, faculty housing, the hotel/conference building, the Early Childhood Development Center should convey a consistent design and features that represent a “residential village” of active learners. It should be comprised of a variety of spaces, both private and public. The levels of care offered (independent living, assisted living, skilled nursing, memory care etc.) will determine the specific spaces necessary to support those levels of care. Industry consultants (APPENDIX IX) have advised that, depending on unit sizes and amenities, it would take approximately 170-200 units to make the center financially viable and self-sustaining. A facility architectural program will need to be developed as part of the design process that would provide detailed space requirement information. However, the following facility and space needs were considered essential by the authors, but are not meant to convey a complete list of facility requirements.

- Most likely approximately 200 retirement units
  - A mixture of studio, 1 bedroom and 2 bedroom units
  - 25 assisted living units (likely studios)
- Kitchen capable of preparing meal services
- Facility dining room
  - 2 smaller dining/function rooms of 20 person capacity
- Local access to primary care doctor’s office with blood draw cubicle
- Swimming pool and changing rooms
- A fitness room
- Outdoor areas & walking trails
- Front office/reception/mail room
- 50 seat auditorium for classes, concerts, lectures, movies, and meetings
- Designated underground Parking/garage for up to 200 cars
- Lobby lounge
- Public area restrooms
- Small store for sundries
- Library
- Support office space
- Storage areas
- Multiple elevators, at least one more than what the code requires
- Barber shop & beauty parlor

Further considerations and discussion for the facility will include the level of care:

1. Mix of Independent Living (IL), Assisted Living (AL), and Memory Care (MC): As we are trying to attract an active residential community group, most, if not all, will be moving to IL initially. Thus AL and memory care areas can be built up later, as needed, but space should be set aside now, at minimum for AL. Perhaps a floor assigned for such purposes can be left to be developed later. (For example, The
Glen at Scripps Ranch, CCRC currently being developed in San Diego, will build its AL, MC and Skilled nursing last, after IL occupancy)

2. AL units can be smaller than IL. Therefore, consideration should recognize that a couple may be sharing, so more flexibility than just a studio is required. The kitchens are often small and limited, consequently no stove/ or oven is necessary. Also, AL usually requires a central station for staff, a small dining area, and multiple activity areas including a kitchen, but on a much smaller scale than for IL. For these residents, the aim is to get them out of their private spaces and actively engaged in their immediate surroundings.

3. MC units can be en-suite rooms. These units also require a central staff station, a small dining area, a large shared activity area and kitchen. Setting aside MC space with a safe, gated outside area for both staff and residents would be desirable. In our discussions with industry professionals, we saw many examples where MC residents were accommodated on one floor.

4. For IL and AL, space should be set aside for an art/crafts room. On visits to Continuing Care Retirement Centers pools seem unused, but the art/crafts rooms are active (usually with female residents). These activity rooms need to be fairly flexible to allow the residents to tailor them to their interests.

5. Skilled Nursing: There is some consideration to offering this service, but it need not be located in the ISC building. The Glen at Scripps Ranch, for instance, is contracting this service to another company which runs skilled nursing.
APPENDIX VIII: EAST CAMPUS MAP

The Intergenerational Living/Learning Village is highlighted in yellow on both maps.
APPENDIX IX: CONSULTANTS & ACKNOWLEDGEMENTS

Consultants

Stephen G. Bailey, Vice President, Development
Maggie Stark (Admissions) & Barbara Thomas (CEO) Kendal Oberlin
Kendal Senior Living Communities
https://www.kendal.org/

Andy Gerber, Vice President of Acquisition & Investment
Matthew Stevenson, Belmont Village Albany (UCB)
Susan Berger, Belmont Village Westwood (UCLA)
Belmont Villages http://www.belmontvillage.com/

Chip Gabriel, President
Generations Retirement Communities, LLC
Portland, Oregon

Karyn E. Speidel
Intergenerational Administrative Analyst
Office of the Vice Chancellor for Resource Management & Planning
UCSD

Acknowledgements

The authors wish to thank the following for lending their expertise and advice for the past year:

Gary Matthews, Vice Chancellor
UCSD Resource Management & Planning
http://rmp.ucsd.edu/index.html

Keith Pezzoli, Director
UCSD Urban Studies & Planning
https://usp.ucsd.edu/

Corliss Vargo
UCSD Housing, Dining & Hospitality
https://hdh.ucsd.edu/

Tim Carpenter, Executive Director
Engaged Aging
https://engagedaging.org/