Developing a Long-Term Strategy
for the
Transformation of Higher Education
to Foster Lifelong Learning:

The Stanford
Distinguished Careers Institute
as a Starting Point and Catalyst

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February 2018
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Background and Context

In just over a century life expectancy in developed countries has increased by more than 30 years, and over the next several decades the percentage of adults over 65 years of age will be 20% of the US population and will approach 40% in a number of countries in Europe and Asia. Many of the changes in longevity are due to the control or eradication of childhood diseases and improvements in public health and environmental safety. Going forward the improved understanding of the biology of aging, control and prevention of disease and improvements in wellness will add additional years of life. There is every reason to believe that lifespans will transcend current biological limits, and create new opportunities and challenges for the global community as individuals age more functionally, and have different expectations about retirement and financial security.

Despite this major demographic shift, the age of 65 still signals the time of transition from work to retirement. With some exceptions, the Age Discrimination in Employment Act of 1967 makes mandatory retirement illegal in the US, but in many European and Asian countries, retirement is still mandatory between 60-65 years for men and, in some countries, is even younger for women. There are certain jobs in the US for which retirement is mandatory, some of which seem understandable and others more arbitrary. For example, commercial airline pilots are compelled to retire by age 65 years while air traffic controllers must retire between 56-61 years of age. Federal law enforcement officers, park rangers and firefighters have a retirement age of 57. In a number of states justices and judges are required to retire between 70-75 years of age while, at the same time, it is notable that Supreme Court justices are appointed for life. While Catholic priests retire at age 70 and bishops at age 75, it is not clear why cardinals and the pope do not have a required retirement age.

The recently released 17th Annual Retirement Survey from the Transamerica Center for Retirement Study that interviewed more than 1800 employers of for-profit companies with 5 or more employees, notes that many of today’s workers envision working beyond 65 or not retiring at all. Many also seek a flexible retirement that could include numerous re-entries to the workplace (so-called “bridge employment”). Indeed 72% of employers recognize that many employees expect to work beyond 65, and 81% of employers consider themselves supportive to having older employees in their workplace. Employers recognize that older employees bring more knowledge, wisdom and life experience to the workplace and that they are often more responsible, reliable and dependable. Further, older workers are more valuable for mentoring and training – underscoring the value of intergenerational learning and teaching. On the other hand, a number of negative perceptions about older workers still prevail, including concerns about injuries and illness, the higher cost of wages, and healthcare disability costs.
It is increasingly clear that there are changing goals and needs of older workers and employers. This changing paradigm is captured in gerontology and lifespan psychology research as “successful aging at work.” This emerging field of developmental psychology builds on earlier models of successful aging and can be extended to the positive attributes and behaviors that could promote the successful aging at work defined by Zacher (Work, Aging and Retirement, 2015; 1:4-25) as including a subjective domain (i.e., a perception of job satisfaction) coupled with psychological wellbeing and objective measures as defined by Rowe and Kahn (Science, 1987; 237:143-149 and The Gerontologist, 1197; 37:433-440) as personal factors (genetics and life style) and contextual factors (autonomy and social support) that impact successful aging. This helps shape the “person-environment” or “person-job” fit which can delineate opportunities for older workers to pursue new or different jobs or careers that more optimally align their personal skills and attributes with the changing expectations and requirements of the workplace. This requires both employers and employees to foster changes in goals and focus, coupled with innovations around roles and jobs that include proactive career planning, self-renewal, the acquisition of strategically valued training together with networking and social resources. To increase the likelihood of success in working beyond 65, employers recommend that employees need to stay healthy, keep up or renew their skills and perform well. These and other proactive behaviors emerging from studies in organizational psychology lead to a new paradigm that I will refer to as the person-education/training-transition triad for aging workers, although it also is relevant to individuals at various stages of the life journey.

To help assess how the global community is responding to these changes, the Hartford Foundation has developed an Aging Society Index that includes five metrics that can be assessed and scaled to compare different nations and societies. These include: Wellbeing focusing on disability-free life expectancy; Equity which estimates of food security, poverty risk and education attainment; Cohesion as a measure of social support and intergenerational co-residence and trust; Productivity and Engagement as a reflection of late life workforce participation and volunteerism; and Security that includes financial security and feeling safe.

Compared to other nations, the US excels in productivity by having greater proportions of older workers in the workplace, perhaps based on having greater adaptability in creating new opportunities for midlife and older workers. In contrast, the US does less well in fostering cohesion, equity and security and despite the fact that the US invests twice as much as any developed nation in healthcare expenditures, it does not excel in most health outcomes, including longevity or overall satisfaction. With the likelihood of work lives extending well beyond the traditional retirement age, it seems reasonable to ask how the US can improve opportunities for social cohesion, security, equity and wellness. Coupled with this is the question whether a return to higher education could be a platform for personal renewal, providing opportunities for extending and deepening a primary career path, while also fostering social engagement and recalibrating wellness. This provides the opportunity to promote a person-
education/training-transition triad that can help optimize midlife transitions and benefit both the aging worker and the workplace.

Stanford began an experiment in 2015 to assess whether a return to higher education in midlife could impact individuals, institutions, and communities by providing opportunities for renewed purpose, social engagement, and wellness. If graduates of college and universities today can anticipate five or more decades of work life ahead of them, a fundamental question is whether their initial education in the first decades of life will prepare them for the changes in the workplace that will evolve during their lifespan. A question is whether higher education at universities, colleges and community colleges can be a platform for continued personal renewal during the lengthening life journey and contribute to the wellness of an aging society as well as provide improved pathways to bridge employment and engagement in the workplace for individuals with diverse and multifaceted backgrounds, work-lives, demography and socioeconomic status.

Our starting point is the development of the Distinguished Careers Institute (DCI) at Stanford. The context and principles guiding DCI will be described below but a core goal is to assess the value of intergenerational learning, teaching and mentoring between college students and individuals in midlife with diverse career and professional expertise. Longitudinal studies will assess whether the triad of renewed purpose, social engagement and wellness can compress morbidity during the life cycle. DCI also seeks to catalyze higher education nationally and globally to develop unique programs that address midlife offerings and assess whether such programs can reduce medical and social services during the lifespan.

DCI is not about leadership training per se but about personal transformation. Accordingly, DCI is exploring the role of higher education as a bridge between the person and the workplace regardless of whether it leads to compensated employment or other forms of engagement in the public or private sectors. Recognizing that the needs of individuals, work settings and communities are highly variegated, it seems plausible that universities, colleges and community colleges can develop opportunities for individuals in midlife that will take different forms but share in common a renewal of purpose, fostering social engagement and recalibrating wellness that have a positive impact on the lifespan and concordant health span of individuals and society.

The Overarching Vision for DCI

The Stanford Distinguished Careers Institute offers highly accomplished individuals from all walks of life the opportunity to come to Stanford for a yearlong residential program of personal renewal and community engagement. DCI is designed to enhance and improve the life journey through renewed purpose, community and network building and a recalibration of health and wellness for individuals and communities and to help foster a new paradigm for the university of the future.
The Overarching Goals of DCI

- To offer an extraordinary opportunity to already established individuals from the public and private sectors, including business, academia, health and beyond, who are ready and eager to reflect on their life journeys, explore new pathways, and redirect their lives for the common good. The new way forward that emerges from participation in the DCI can be one long-anticipated and hoped for or one not yet imagined. DCI serves as a transition to new ventures in the lives of these individuals, allowing them to create something unique that will improve themselves, their families and community and ultimately, the world.

- To provide individuals who already have distinguished accomplishments the chance to utilize the wealth of knowledge and unique attributes of one of the world’s great universities and, in turn, to contribute their extraordinary expertise and wisdom to the learning of students just beginning their professional journeys through intergenerational learning, teaching and mentoring.

- To engage cohorts of highly accomplished leaders in new learning communities that will extend beyond the formal program and make use of social networking to transcend time and space.

- To give participants in the DCI an opportunity to assess their personal health and well-being and to develop a plan for moving forward with a healthier and more productive life plan. Living longer means being fit and more able to take on the challenges of aging – both physical and cognitive. In addition to physical health, the DCI seeks to foster ways to improve and sustain emotional and spiritual health and well-being based on the individual goals and needs of fellows.

- Through its Partners program, the DCI also provides an opportunity for spouses and life-partners of fellows to participate in all aspects of the program and to share in a unique and special journey that recalibrates personal and professional life.

The current configuration of DCI is structured around the intersecting pillars of renewing purpose, fostering the development of a new community and recalibrating wellness (as noted from a physical, emotional and spiritual basis).
Stanford DCI Program Overview
As currently operationalized, there are eight defined Purpose Pathways that include:

1. Arts and the Humanities
2. Business, Leadership and Entrepreneurship
3. Education, Teaching and Learning
4. Energy and the Environment
5. Engineering Sciences and Design
6. Health and Healthcare – Innovation and Discovery, Policy, Healthcare Delivery, Clinical Practice (including Global Health Initiatives), Bioethics
7. Independent Study
8. International Studies and Programs
9. Social Sciences, the Rule of Law, Policy and Public Service

The Purpose Pathways are broad and thematic and, as originally conceived, are meant to be simple guard rails and ways of bringing fellows with common interests together into a shared grouping. The Purpose Pathways help define an area of interest and focus but they are not meant to prescribe or limit areas, themes and topics that will be explored by the fellow. The Purpose Pathways are not directly linked to a life or career outcome but are more analogous to a college concentration or major by providing a connection to like-minded individuals and faculty. There is not a core set of courses or requirements and, in fact, fellows are encouraged to pursue topics and courses outside of the purpose pathway and, in particular, outside of their own career area or earlier education. The Purpose Pathways also serve the purpose of helping to select a class (or cohort) that is diverse and complementary in their interests and that is not monotonic in prior experience or future interests. The Purpose Pathways are also coupled with programs that foster community and that seek to recalibrate wellness as will be described below. They will be reviewed in the current and future state below.
Focusing in on the rationale and context for the fundamental pillars of purpose, community and wellness and how they serve as the foundations for DCI

**Purpose**

Purpose can be considered from epidemiologic studies as well as ones based on social and psychological sciences. For example, Anne Case and Angus Deaton (*PNAS*. 2015;112:15078-15083) have recently demonstrated that between 1999-2013 middle aged white non-Hispanic males and females without a college education have among the highest death rates in the USA. The causes of death include drug and alcohol poisoning and suicide associated with self-reported declines in health and mental health and increases in chronic pain and the inability to work. *In conjunction with lower levels of education, poor health behaviors, and lower socioeconomic status, a lower degree of hopefulness (and purpose) and a higher degree of social isolation also contribute negatively to life expectancy, whereas community and engagement are positive correlates* (note Andrew Steptoe, *PNAS* 2013;110:5797-5801).

From a social science perspective, one can draw on both current and past studies that have examined the impact of purpose on various health and life outcomes. An important study of purpose was conducted by William Damon and focused on 1200 youngsters aged 12-24 years (*The Path to Purpose: How Young People Find Their Calling in Life*. New York, Free Press, 2008). In this and related studies, purpose is defined as a stable and generalized intention to accomplish something that is at the same time meaningful to the self and consequential for the world beyond the self. Based on questionnaires and interview data, Damon was able to divide these young people into four groups: Purposeful (20% of the sample) who seek something meaningful that represents an ultimate concern; Dreamers (25%) who express ideas about purpose they would like to have; Dabblers (31%) are engaged in activities that appear potentially purposeful; and the Disengaged (25%) who express no purpose.

While the delineation and impact of purpose is important early in life, it is also relevant at different stages of the life journey. With that in mind, Damon and Ann Colby are conducting a similar study to that done in adolescents/young adults to individuals over 50 years of age. Here too they sampled 1190 individuals who participated in a questionnaire and a smaller number who were interviewed. They found that 31% of this cohort expresses “purpose” as defined above that includes engagement in “self goals” as well as “beyond-the-self goals.”

In this sample, self-goals include things like: a): Pursue a hobby or sport I love; b): Work toward strengthening my financial security; c): Continue or develop a successful career; d): Gain new skills and knowledge; e): Find ways to spend time with good friends. In contrast beyond-the-self goals include: a): Work on something that improves the lives of others; b): Work on something that contributes to the world; c): Teach what I have learned in life to others; d): Contribute to building a good community;
e): Pursue my spiritual goals. Overall, teaching and spiritually are important to purposeful midlife individuals and speak to the importance of intergenerational activities and wellness (which also relate to the Hartford Foundation metrics of cohesiveness and wellbeing). The Damon/Colby study notes that among the barriers to achieving beyond-the-self goals in midlife are health problems, financial needs and like-minded people (this being a surrogate for community).

Other data also support the importance of purpose from multiple sectors of inquiry. Of note, Boyle et al demonstrated in an analysis of two longitudinal studies of 1200 community-dwelling older individuals, that metrics of “greater purpose in life” is associated with a substantially reduced risk of all-cause mortality (Psychosom Med. 2009; 71:574-579). In a separate study, Boyle et al demonstrated that purpose in life was also correlated with a reduced risk for Alzheimer disease and mild cognitive impairment (Arch Gen Psychiatry. 2010; 67:304-310.

In classic studies, Erickson noted that purposefulness is a criteria for individual strength during adult years and Piaget has highlighted the importance of sustaining a sense of direction as a correlate of functional effectiveness. Work done by Carol Ryff from the University of Wisconsin shows a correlation between purpose, personal growth, relationship building and a sense of command over life and a positive self-image. Purposeful activities that are beyond the self also correlate with prolonged lifespan. For example, the Berlin Aging Study demonstrates that individuals engaged in non-custodial grand-parenting have longer lifespans and a recent study from Johns Hopkins also demonstrates that individuals involved in caregiving activities have reduced mortality. These correlates also need to balance the positive and negative impact of stress on health outcomes (see below). It is also important to note that purpose cuts across all socio-economic strata. For example, Colby has observed that 79% of Americans in midlife find their work to be meaningful, regardless of the type of work.

**How do these background data relate to DCI now and in the future?**

Based on the background research findings described above, it is important to question the attributes of an ideal program, how well we currently achieving it, and what we can do to improve it in the short and longer terms. It is also important to note that this must be considered an iterative process that is based on foundational principles, but that is flexible enough to respond to individual, institutional and societal needs as they continue to evolve and develop. It is also important to recognize that the needs and expectations of individuals are highly variegated and that any generalizable program must be balanced by a personalized approach. Renewing purpose can be impacted by the career and life path an individual has had up until her or his DCI experience, and is also connected with personal, family and financial considerations for the future. Among the additional impacting variables are health, financial security, age, geography, opportunities and desires for change. There is no one-size-fits-all solution but there are some common underlying themes and principles.
What are the attributes of an ideal or optimal program?

An important goal is to foster the opportunity for each fellow to engage in an examination of purpose and its renewal based on her or his past life experiences and those that are being sought for the future. An additionally important question is whether such an exploration should be structured or whether it should be an inquiry that emanates from self-reflection coupled with dialogue with other fellows/partners, faculty advisors and other members of the DCI and Stanford community. Similar to the college and even graduate experience, purpose emerges from probing, questioning and exploring – through course work, interactions and introspection. A college concentration or major provides the substrates for career development but is not a proscription or career development plan per se. Even core curricula are based on general principles (e.g., scientific reasoning, interpretation, reasoning etc.) but not a “how-to formula”. While a college concentration serves as general platform for career development, most individuals ultimately work in areas that fall outside the boundary of that area of concentration. Indeed, a broad education is often seen as the best way to acquire skills for a flexible life and career development.

While there are analogies of the Purpose Pathway to an undergraduate (or even graduate major or discipline), it is important to ask whether defining purpose is a discipline in its own right and whether it could form the substrate for core program that could be featured at the beginning and at different times during the DCI year(s). At this juncture, it is safe to conclude that the many speakers and programs DCI has hosted to discuss purpose generally and life transition more specifically have largely fallen short of the objective. By way of context, following is the list of such speakers an and topics:
<table>
<thead>
<tr>
<th>Cohort Year</th>
<th>Transition/Transformation Topics</th>
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| 2015        | 1. Strategic Management and Non-Profit Boards, Bill Mehan  
               2. “Rest of Your Life,” (one day symposium), Lili King  
               3. Equine Leadership Program  
               4. The Brand of You, Charles Rashall  
               5. Transition and Purpose, Randy Byrnes  
               6. Innovators Network, Chuck Denham  
               7. Board Service, Skip Victor and Richard Eidinger  
               8. Personal Financial Planning, Steve Vernon |
| 2016        | 1. Rest of Your Life (shorter version), Lili King  
               2. Transitions and Purpose, Randy Byrnes/Marc Freedman  
               3. Transformation Made Easy, David Zelman  
               4. Next Steps – Career Transition Coaching Project, Heather Corcoran and Rebecca Zucker |
| 2017        | 1. Designing Your Life (full day, part 1), Dave Evans  
               2. Opportunity Lab – How to Create a Purposeful Life in the Age of Disruption  
               3. Rethinking Happiness, Jennifer Aaker  
               4. Aging and Society, Paul Irving  
               5. Alumni Networking Session, Bernadette Clavier  
               6. The Innovative Mindset, Patricia Madson  
               7. Transitions and Purpose, Marc Freedman and John Tarnoff  
               8. Designing Your Life (follow up session), Dave Evans |
| 2018        | 1. Designing Your Life (full day), Dave Evans |

A notable exception has been the program led by Dave Evans based on the undergraduate course he and Bill Burnett, which is featured in their book entitled: *Designing Your Life. How to Build a Well-Lived Joyful Life*, New York, Alfred A Knopf, 2016. Further developing this course for DCI is an important goal. It is also interesting to opine on a recent reflection from Dave Evans after he conducted a follow-up to his first quarter whole day event and noted that many fellows are seeking to continue in the program beyond a year. He commented “*It does appear that many fellows are experiencing a 2-phase process in DCI: Phase 1 - a curated, learning-intensive and broadly if not un-directed "lostness" in the "neutral zone" followed by a much more directed Phase 2 - focused more on narrowing the field, choosing and preparing to (re) launch.*” This observation requires further review and discussion as it could help shape
thinking about the length of the DCI program and also ways that it can be compressed or
tailored to meet individual needs and goals.

In considering an optimized program, it would seem that a combination of loosely
structured and highly personalized examination of “purpose” by individuals and by the
community of fellows would be best. The current approach to Purpose Pathway selection,
assignment into small groups led by a faculty advisor, does appear to be working but
could be optimized further. This could include the availability of someone with
organizational psychology training who could participate in Purpose Pathway discussions
and follow-up with fellows/partners in ways that continue to shape their thinking and
planning. Coupled with this could be a curriculum or case study on purpose (see below)
that could be introduced into the small purpose groups and/or into group discussions with
the fellows at selected sessions during the Transformation Series. One interesting area to
be explored is based on some recommendations from William Damon which have the
advantage of linking to programs we have already successfully initiated. More
specifically, the prospect for developing a structured program based on “Guided
Autobiography” has the potential for unique application to DCI and related programs.
This method is reviewed by Birren and Birren (Aging and Biography: Explorations in
“may lead to new insights into important and heretofore overlooked aspects of life.”
Among the positive outcomes of autobiography according to Birren are:

- “Sense of increased personal power and importance;
- Recognition of past adaptive strategies and application to current needs and
  problems;
- Reconciliation with the past and resolution of past resentments and negative
  feelings;
- Resurgence of interest in past activities or hobbies;
- Development of friendships with other group members;
- Great sense of meaning in life;
- Ability to face the nearing end of life with a feeling that one has contributed to the
  world”

The success already achieved in DCI by the Life Journey Transformation program
(see below) suggests that a more structured and “Guided Autobiography” could
complement the life journey series and amplify the quest of renewing purpose. This
theme will be explored in 2018 with a goal of implementing a program that builds on
these principles in 2018 and 2019. It is also important to note that a “Guided
Autobiography” program could provide an additional rich database to that already being
collected in the longitudinal interviews of DCI Fellows/Partners (see below).

**How well are we currently achieving the ideal or optimal program?**

To provide some interim data, we polled the graduates of the 2015 Inaugural
Class (which graduated in December 2015) and the 2016 Class that graduated in
December 2016, but of whom 17 remained as Continuing Fellows). Fellows were asked
to respond to questions assessing their current activities and how they have been impacted by their DCI experience. Because of the small numbers and short follow up to date, these data can be only viewed as generally directional. To date we have received 20/31 Inaugural responses (65.5%) and 24/32 from the 2016 cohort (75%). An additional mailing will go to non-respondents shortly since all indicated a willingness to respond. Here is what was reported.

### Current Activities: 2015 and 2016 DCI Classes

**What new projects or opportunities have you pursued since finishing your DCI year?**

**Inaugural Year:** 100% of respondents indicated they were pursing new projects.  
**2016 Cohort:** 96% of respondents indicated they were pursing new projects.

**How is what you are doing now related to what you thought you might be doing before you began DCI?**

**Inaugural Year:** 40% of respondents indicated they were doing something different than what they envisioned when they entered DCI.  
**2016 Cohort:** 63% of respondents indicated they were doing something different than what they envisioned when they entered DCI.

**How did your DCI experience contribute to or even change the direction or outcome of your current activities?**

**Inaugural Year:** 95% of respondents indicated that the DCI experience contributed significantly to their current and future plans.  
**2016 Cohort:** 96% of respondents indicated that the DCI experience contributed significantly to their current and future plans.

**How does what you are doing now relate to what you envision you may be doing over the next 1-2 years and, where possible, 3-5 years?**

**Inaugural Year:** 100% of respondents indicated that what they are doing now will relate to what they envision over the next several years.  
**2016 Cohort:** 96% of respondents indicated that what they are doing now will relate to what they envision over the next several years.

These data suggest that there is a high level of satisfaction with the program to date. This is complemented by the fact that so many fellows/partners wish to remain part of DCI for an additional 6-12 months as Continuing Fellows. It is also suggested by the eagerness of fellows/partners to remain part of DCI “more than a year” through various advisory committees that have now evolved to a DCI Alumni Network. Further is the advocacy of fellows/partners for creating new opportunities at Stanford in association
with various schools or programs (e.g., Center on Longevity, School of Earth and Environmental Sciences, the Law School) as well as the development of working groups that are part of the DCI Innovation Hub being led by Dr. Susan Golden, DCI’16.

**What can be done to improve the approach to “renewing purpose” in the short and longer term?**

While there is much to be said of an unstructured approach to purpose planning along the lines currently in place it is important to explore how this might be further enhanced. The selection of a Purpose Pathway is a good start, as is the grouping of fellows/partners from Purpose Pathways to small cohorts assigned to a common faculty advisor. The twice quarterly meetings of the Purpose Pathway groups provide an important anchor and community and is an advance from more individualized fellow-faculty assignments that was followed in the first year(s), although these are not mutually exclusive.

Having fellows/partners summarize their progress in their respective Purpose Pathways in a written document during the first quarter and then advancing it in the second quarter to more of an action plan is an important opportunity, but attention should now be given to how to move this from conception to next phase thinking. It could be helpful, for example, for each fellow/partner to review that progress with their faculty advisor and/or the program director. How this can be connected to the “Guided Autobiography” concept outlined above is a worthy exploration. It would also seem important for each fellow to construct a short report at the end of the year annotating their progress and outlining what is needed to operationalize future plans. This could be in addition to whatever emerges from the “Guided Autobiography” project. This could have particular relevance to individual who seek to spend an additional 6-12 months as a Continuing Fellow.

An additional important question and opportunity is the prospect of including a more formalized Purpose Pathway curriculum into the DCI year, either before it begins and/or at different stages of the DCI year which may be the “Guided Autobiography” or a related program. However, it is important to ascertain whether such a curriculum exists or will need to be developed. It is of interest that that Professor Jennifer Aaker is currently teaching a GSB course entitled “Rethinking Purpose” [https://rethinkingpurpose.stanford.edu/](https://rethinkingpurpose.stanford.edu/). Of interest is that past and future DCI Fellows are helping with this course and it will be helpful to gauge whether the materials and reading as relevant to the DCI community or might be adapted to its unique needs. A similar discussion will continue to unfold with Dave Evans regarding the Designing Your Life curriculum and how that might be further adapted to DCI. In addition, discussions with Professors Anne Colby and William Damon, experts on purpose through the lifespan, will be further engaged in the question of whether a specific curriculum on purpose can be developed for DCI. It should be noted that we are already using Colby/Damon tools as part of the research project that will evaluate DCI over the long term.
As part of these considerations, Phil Pizzo is considering taking the lead to formulate a Purpose Pathway curriculum that would include both didactic sessions and work group discussions. The latter could be incorporated into the Purpose Pathway-Faculty Advisor sessions or, over time, extended beyond that session. The goal is to amplify individual reflection with more structured examination. Such a curriculum could also build off the Designing Your Life module. One matter under consideration is the prospect for developing a curriculum and/or tool kit that is not only applicable to DCI but which could lend itself to adaptation to other colleges and universities that take place in the Collaborative that will be established over the next several years.

Another goal is to develop an inventory of resources that could help fellows/partners identify opportunities they might pursue once they leave Stanford. These include both public and private resources that are listed on DCI’s private portal. Going forward, there appears to be a need to develop a more creative and embracing resource that could use social media and matching algorithms to help connect DCI Fellows (and ultimately individuals from other programs) with opportunities in the global public-private sector that could include employment, non-profit activities and volunteer engagement. Whether this should be done under a DCI umbrella or as part of a spinout or under the Collaborative Umbrella (see below) remains to be determined. While the ideas behind this program are still nascent, the development of such a resource could prove to be an exceptional tool for the DCI (and beyond) community.

**Community**

The importance of community and social engagement to longevity and positive health outcomes can be shown from multiple dimensions. Conversely, loneliness has a negative impact on health and well-being. One of the interesting long-studies that has demonstrated the importance of social engagement is the Harvard Grant Study that followed 268 men enrolled as Harvard undergraduates between 1938-1942 and followed them in a rigorous manner for nearly eight decades. George Vaillant has reported the results from this longitudinal study have been reported by in a book entitled *Triumphs of Experience. The Men of the Harvard Grant Study*, Cambridge, Harvard University Press, 2012. Among the most important correlates with longevity is social connectedness. Of the 10 key factors (the so-called Decathlon) is high generativity, a good marriage at 60-85 years, good social support, and being close to one’s children. In addition, other factors include success at work, low psychological distress, and financial stability. The Harvard study also aligns social connectedness to a sense of happiness – which is only marginally related to affluence or financial status except for poverty. It has also been observed that being part of a community is also an important correlate of wellness (see below).

From a population science perspective, there are also strong correlates of social relationships with health and lifespan outcomes. For example, J Holt-Lunstad (PLOS Medicine, 2010; 7: 1-13) observe from a meta-analysis across 148 studies (involving 408,849 participants) that positive social relationships correspond with a 50% increase in odds of survival compared to those with poor or insufficient social relationships. This is not unique to older individuals since similar findings have been previously observed from
the outcomes of infants and children in custodial care. As the authors conclude “Social relationship based intervention represent a major opportunity to enhance not only the quality of life but also survival.” In a related study, Valtora et al (Heart, 2016;102:1009-1016) demonstrated in a different meta-analysis involving 35,925 records gleaned from 23 studies in high-income countries, that poor social relationships were associated with a 29% increase in the risk of incident coronary heart disease and a 32% increase in the risk of stroke.

Thus, from various perspectives, social engagement and the renewal or building of a community is a positive correlate with health span and lifespan and, accordingly, a second essential pillar for the foundational elements of DCI.

**What are the attributes of an ideal or optimal program?**

A tenet of developmental psychology is that for most people, intimate and lifelong friends are acquired in the first decades of life – but generally not in midlife. This tenet is changing as a consequence of the lengthening lifespan and is evidenced by the robust and sustained community that has taken place within each new DCI cohort. Since the Inaugural 2015 Class, each group of fellows and partners have developed a community of friends and colleagues that extend “more than a year.” Indeed, if asked what is the most important asset of a program like DCI, many would respond that it was the new community that they entered, contributed to and benefited from. From the beginning of DCI, efforts were made to foster community in several ways. First was limiting the size of the program to 25 fellows. While this may seem a bit arbitrary, most would agree that when group sizes exceed 40 people, it is hard to experience a harmonious and integrated community.

In the case of DCI, the combination of fellows and partners brings the per class cohort to between 35-40 individuals. Additional factors contributing the prospect of forging a new community is the selection process for fellows. This involves having applicants apply to a specific Purpose Pathway, which because of the breadth (see above) fosters the opportunity for diversity. This is further enhanced by the fact that the Purpose Pathways are not linked to a career path but to an intellectual and academic theme that is aligned with broader goals of the University. Efforts are made to create a class that is balanced, recognizing that some Purpose Pathways (e.g., Business, Leadership, Entrepreneurship or Health and Healthcare or Social Sciences) are more sought than others (e.g., Engineering, Energy and the Environment). That said, in each year, the selection process assures that every Purpose Pathway is populated by more than one individual. In addition to creating diversity of interests, demography, geography, etc. in each new class, the selection process involves lengthy interviews of applicants and personal references with the Founding Director and Executive Director. A key part of this interview process is determining the “emotional intelligence” of applicants, with the goals of selecting individuals who will have positive interactions with their cohort(s) as well as with students, faculty and the Stanford community. While this process is not completely successful, it is quite exceptionally so – such that many fellows have offered the observation that the selection process appears to be alchemy in how well it fosters a
positive sense of community among the cohort participants. While the selection process is rigorous and probing, it is likely that many of the individuals who are not offered spaces in DCI would likely do well if they had been able to join the program. While it seems relevant to question how well the selection process would be carried out with a different “admission group” or how this will be handled at different colleges and universities (see below), it is likely that over time, generalized principles for choosing individual most likely to succeed will be capable of articulation.

An additional question is who are the optimal candidates and whether firmer conditions should be set to define this. For example, at this juncture, DCI is focused on individuals in “midlife” but the applicant group is increasingly broader. In the past three years individuals in their early to mid-forties have applied and a handful accepted into DCI. It is appropriate to question whether DCI is the optimal program for individuals younger than 50 year of age. It is important to be open-minded about this and to gain experience – especially as the social narrative on career transitions and life journeys continues to evolve. At the upper end of the age spectrum, DCI has admitted individuals in their mid-60s and a fewer number in their early 70s. A question is whether individuals at the lower or upper end of the age range optimize the community and the DCI program and experience. If the primary goal of the program was to help individuals begin new careers (in whatever capacity) that might lead to conclusions about which age cohort or mix is optimal. But if the program is designed to enhance and improve the life journey (and compress morbidity) than age limits or restrictions would seem less appropriate. At this time it seems best maintain flexibility and collect data before forming conclusions about the ideal candidate pool, and to some extent, profile. Further it is important to note that the candidate profile is likely going to be different at different colleges and universities who are serving different communities – and that this may also change over time.

**How well are we currently achieving the ideal or optimal program?**

In its current stage of development, DCI has developed or fostered 10 programs to foster community and bring the cohorts together within each cohort and also among them. These include:

**Transformation Series:**

From it is inception, the weekly sessions held on Wednesday evenings were designed to bring the fellows and partners into life journey storytelling that provides reflections and opportunities for social and personal connection. Since 2016 DCI has worked with Jonah Willhnganz and the Stanford Storytelling Project (https://storytelling.stanford.edu/) to help fellows/partners organize their plans for presentations. Over the first three years of DCI, the timing and planning for these life journey sessions has been refined and developed and this has become one of the most successful routes to building community and friendship within DCI cohorts. To make the sessions even more meaningful we are encouraging fellows/partners to focus on selected life experiences rather than a review
of their personal bios. This is a challenge and it requires time – for evolution and also time for presentation. It now seems clear that in any one session no more than two presentations can be offered per session – both to permit each presenter an adequate amount of time and to not overwhelm the community with the information being offered. While we have contemplated ways of concentrating the presentations into a series of days, it also seems clear that there is a saturation effect and that spreading them out through the first two (and likely three quarters) is important. While this program has been quite successful, there do appear to be ways to make it even more so, and we will be having discussions with The Storytelling Project leadership to explore ways to do so.

Although not anticipated when we planned the Storytelling Project to help define the Life Journey presentations, the prospect for constructing a parallel program using “Guided Autobiography” to help refine the Purpose Pathway is an exciting new dividend that is clearly worth exploring.

Faculty Fellow Dialogues:
The intent of this weekly series is to expose DCI Fellows/Partners to a wide variety of faculty, topics, issues and disciplines within the Stanford community. The current format has continued to evolve and is evaluated on an ongoing basis. The most successful programs include a topic of broad interest in which the faculty member is able to teach, listen and interact with the fellows during this weekly lunch series. The Faculty Fellow Dialogue also permits faculty from throughout the campus to learn about DCI and, even if they are not presenting, to be more welcoming to DCI Fellows/Partners who may be interested in taking one of their classes. Not unexpectedly, not every faculty member is capable of thoughtful engagement and thus every presentation is prospectively evaluated and, over time, a list of the best-rated presenters is being curated and developed. At the end of 2017 (the third year of DCI), over 55 highly rated faculty have been identified. In addition, another 85 faculty have been vetted by Phil Pizzo in one-on-one meetings and are being scheduled for future presentations. Further, an additional 102 faculty members have been identified by Phil Pizzo from reviews of Explore Courses, School faculty lists and award-winning teachers and are being scheduled for meetings to brief them about DCI and to solicit their future participation in a Faculty Fellow Dialogue or some other DCI activity. Put another way, to date more than 130 faculty have presented to DCI or are scheduled to make a presentation (this doesn’t include another group of faculty who did make a presentation but who did not achieve a rating score that would lead us to invite them back). By the end of 2018, more than 250 faculty will have been briefed and/or made a presentation to DCI – which is helping to foster the community network between fellows and faculty.
Colloquia:
Except for summer, DCI hosts a one day colloquia lead by a prominent faculty member who develops a program on a specific theme and topic. This enables DCI to bring the community of fellows/partners along with spouses and life partners from the current DCI class along with Continuing Fellows and occasionally alumni to participate in a daylong exposition of a timely topic. The goal is to be educational, engaging and interactive. The topics and presenters vary each year and thus promote opportunities to provide wide and rich exposure of exciting research and scholarship from some of Stanford’s best and most prominent faculty. Here is a sampling of past and future colloquia:

<table>
<thead>
<tr>
<th>Cohort Year</th>
<th>Quarter</th>
<th>Faculty Leader</th>
<th>Colloquia Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>Winter</td>
<td>William Newsome</td>
<td>The Brain Through the Life Cycle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Energy and Sustainability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>David Grusky</td>
<td>Poverty and Disparities</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td>Jeff Koseff</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>Winter</td>
<td>Michael Longaker</td>
<td>Stem Cell Biology</td>
</tr>
<tr>
<td></td>
<td></td>
<td>David Kennedy</td>
<td>The West</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Deborah Stipek</td>
<td>Early Childhood Education and Related Public Policy</td>
</tr>
<tr>
<td></td>
<td>Spring</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td>Jane Shaw</td>
<td>Religion and Spirituality</td>
</tr>
<tr>
<td>2017</td>
<td>Winter</td>
<td>Laura Carstensen</td>
<td>Longevity and the Biology of Aging</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scotty McLennan</td>
<td>Ethics and Truth Telling in Business and Society</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jane Shaw</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>Winter</td>
<td>Russ Altman</td>
<td>Artificial Intelligence</td>
</tr>
<tr>
<td></td>
<td></td>
<td>David Demerest</td>
<td>News and Fake News in Communications and Social Media</td>
</tr>
<tr>
<td></td>
<td>Fall</td>
<td>Phil Pizzo</td>
<td>Wellness Through the Life Cycle</td>
</tr>
</tbody>
</table>

These sessions have been well received and further connections between Fellows (across classes) and prominent faculty over the course of a day-long event, often followed by a social gathering.

Community Dinners:
An additional way DCI seeks to engage the Stanford community and DCI Fellows/Partners is through community dinners that provide an opportunity for a reception, presentation and less formal engagement of
the DCI community with some of Stanford’s more prominent faculty and leaders. Examples of DCI Community Dinner events follow:

<table>
<thead>
<tr>
<th>Faculty and Other Leaders Who Have Presented Between 2015-1017</th>
<th>Faculty and Other Leaders Who Have Agreed to Participate in 2018 or Future Years</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Eavan Boland (June 2017), Director, Stanford Stegner Creative Writing Program and Renowned Poet</strong></td>
<td><strong>Alex Nemerov</strong>, Chair of Arts Department and Award-Winning Art Historian</td>
</tr>
<tr>
<td><strong>Al Roth (2015), Nobel Laureate in Economics</strong></td>
<td><strong>John Mitchell</strong>, Vice Provost for Distance Learning</td>
</tr>
<tr>
<td><strong>St Lawrence String Quartet (2015, 2016, 2017)</strong></td>
<td><strong>Carl Weiman</strong>, Nobel Laureate in Physics and Innovator in Science Education</td>
</tr>
<tr>
<td><strong>John Hennessy (2015), President of Stanford University</strong></td>
<td><strong>Steve Chu</strong>, Nobel Laureate in Physics and former Secretary of the Department of Energy</td>
</tr>
<tr>
<td><strong>George Shultz (2015, 2016, 2017), Former Secretary of State (and beyond)</strong></td>
<td><strong>Adam Johnson (2018), Pulitzer Prize Winning Author</strong></td>
</tr>
<tr>
<td><strong>Michael McFaul (2015, 2016), Former Ambassador to Russia and Director of the Freeman Spogli Institute</strong></td>
<td><strong>Robert Sopolsky (2018), Award-Winning Author and Neuroscientist</strong></td>
</tr>
<tr>
<td><strong>Niall Ferguson (2017), Award-Winning Author and Historian</strong></td>
<td><strong>Michael Levitt</strong>, Nobel Laureate in Chemistry</td>
</tr>
<tr>
<td><strong>Irving Weissman (2015), Director of the Stem Cell and Regenerative Medicine Institute</strong></td>
<td><strong>Paul Brest</strong>, Former Dean of the Law School and former President of the Hewlett Foundation</td>
</tr>
<tr>
<td><strong>Jane Shaw (2015, 2016), Dean for Religious Life</strong></td>
<td></td>
</tr>
</tbody>
</table>
Alumni Networking: In 2017, at the Second Annual Alumni Meeting that brought fellows from the Classes of 2015, 2016 and 2017 into shared activities and networking, DCI also officiated two other major activities.

The Annual DCI Life Journey Inspiration Award
This award is designed to bring recognition to extraordinary individuals whose lives exemplify purpose, community and wellness and who have made life and career transitions that have impacted individuals and institutions. This award also brings recognition to the DCI community within the Stanford community and beyond. Current and future DCI Life Journey Inspiration Award winners are:

2016: Penny Pritzker, Secretary of Commerce
2017: Paul Irving, Director of the Center on the Future of Aging
2018: Condoleezza Rice, former Secretary of State and Professor at Stanford University
2019: Anna Deveare Smith, Award-winning Actor, Author and Teacher

The evolution of DCI-Alumni Advisory Committees into the DCI-Alumni Network
With the graduation of the first DCI class at the end of 2015, several alumni advisory committees were formed to help provide input to the Executive Director and Founding Director about the current a future evolution of DCI. The Advisory Committees included:

Steering Committee:
Led by Shawn Hardin, ‘15 and Marsha Vande Berg, ‘16
Strategy Advisory Committee, Jean Hurley, ‘15
Program Optimization Committee, Debbie Byron, ‘15
Outreach to Educational Institutions, Ann Stanton, ‘16
Outreach to the Workplace and Society, Rich Goldberg, ’15 and Mike Bracco, ‘16

These committees met independently and periodically with the DCI leadership and presented observations and recommendation to further improve the DCI experience. Many of these recommendations were incorporated into future program developments and, in many ways, the current DCI program (while still under optimization) has become ever more successful and impactful thanks to the efforts of these committees and DCI alumni.

Based on these important contributions and the continued development of the DCI program, the decision was made in the Fall of 2017 to migrate from the above advisory committee structure to an Alumni Network. The
DCI leaders worked closely with Debbie Byron (DCI Partner ’15) who has played an important role in articulating the future of a DCI Alumni Network and who has set down some of its governing principles and goals. A key feature of the Alumni Network will be to promote continued and future interactions among the DCI classes across all years and for “more than a year.” An important function of the Alumni Network will be its self-government but close alignment with the DCI leadership in a bidirectional mode of communication and interaction.

Self-forming DCI Communities:
During the 2016 Cohort (year three of the DCI program) self-forming “interest groups” formed among the DCI Fellows, one focusing on Longevity and others on Children in Poverty and Advocacy. Of these, the interest group on Longevity, led by Susan Golden, ’16, has evolved to form the basis for creating an Innovation Hub that aligns DCI Fellows across all classes to the Center on Longevity. An extension of this is embraced by Susan Golden’s leadership is “Hacking for Longevity (H4L) which continues to unfold in 2017-2018. These are novel and important projects for a variety of reasons. First, they are inspired by DCI Fellows/Partners and second because they are addressing important and challenging issues that both engage the talent of the DCI community and forge collaborations with the Stanford and potentially venture and investment communities in Silicon Valley. While they are still best seen as experiments, they represent another example of how the creativity and skills of DCI Fellows can be expressed in areas they did not envision when they began the program. Not only does it demonstrate the power of innovation, it also makes clear that, in some situations, “purpose” cannot be programed but must be allowed to rise within the seeds of creativity that reside in individuals – who are part of a broader community of innovation and entrepreneurship.

Mentoring and Advising Activities and Intergenerational Learning and Teaching:
As noted above, one of the important goals of DCI is to foster community through intergenerational learning and teaching. Indeed, this is one of the most important attributes of DCI and is an exemplar on how programs like it can transform higher education by bringing together life-experienced learners like DCI Fellows/Partners with undergraduate and graduate students, as well as professional students from different sectors of the university. Assessing the impact of DCI on Intergenerational Learning and Teaching is one of the primary research goals for DCI (see below) and preliminary data on the richness and robustness of even informal mentoring has been recently gathered in a survey by DCI’17 Partner Julia Randell Khan. This includes numerous examples of highly successful and often continued mentoring and collaboration activities between DCI
Fellows and undergraduate students, graduate students, postdoctoral fellows and other degree programs.

Since its inception, the DCI leadership has met with all School Deans, Vice Provosts, Institute and Center Directors and explored ways for interaction between DCI Fellows/Partners and the diverse Stanford community. This has resulted in exploratory ventures with the Stanford BEAM (Bridging Education, Ambition & Meaningful Work) program for undergraduate advising, regular presentations featuring DCI Fellows in dialogue with graduate students (fostered by the Vice Provost for Graduate Education (VPGE), informal interactions the MSx students, engagement with programs in Social Innovation, the Haas Center for Public Service and others. Another important example is the role that DCI Fellows will have in serving as mentors to the Knight Hennessy Scholars who will enroll in 2018. It is already notable that some DCI Fellows participated in the selection and screening of candidates to the Knight Hennessy program. Further it is of interest that two fellows, Rick Woolworth, ’17 and Tom Bedecarré, ’16 are developing a program to help future DCI Fellows to become successful mentors. This is an excellent example of DCI Fellows promoting new skills and engaging with important new programs at Stanford – further building a broad community.

Some of these have been more successful than others – but in each case, there appears to be a strong interest from various sectors of the Stanford University community to interact with the DCI Community.

It is notable that measures of the integration of DCI into the Stanford community is the ever increasing recognition of the program by faculty throughout the university, support from the President (past and present), Chair (past and present) of the University Trustees and the fact that DCI is listed on the Stanford website of programs for lifelong learning (https://www.stanford.edu/list/continuing/) and that in 2018, DCI will be included in the annual publication of Stanford Facts (http://facts.stanford.edu/) in its online and printed version. Given that DCI has been in existence since January 2015, this level of recognition and integration into the Stanford community is notable and important.

**Discipline or Interest-Based:**

While a primary focus of DCI is intergenerational learning and teaching, opportunities for special program development for DCI Fellows and Partners also provide community building. One of these is the Memoir Writing class that was instituted in 2015 thanks to the support of Eavan Boland, Director of the Stegner Creative Writing Program, and that continues through the present – with the opportunity for the addition of an intermediate level class 2018 for Continuing Fellow/Partners who have
already participated in the introductory course during their fellowship year. This is an excellent example of a program that fosters community within a cohort and with an important Stanford program. Other opportunities in different areas may lend themselves to exploration in the future.

Center-Based or School-Based:
Developing alignment of DCI with various Schools and Centers is also evolving in an organic manner. The first of these was the installation of Susan Golden, ’16 as a DCI-SCL Fellow, an appointment that has proven highly successful to date but which requires further development. A second is based on the innovative work of Joan Salwan, ’16 who is now serving as a DCI-Environment and Earth Science Fellow. In 2018, Kameel Khan will serve as a DCI- Law School Fellow and Julia Randell Khan will be a Visiting Scholar with the Stanford Center on Longevity. Another example is the role that Ronjon Nag, ’16 has developed with Continuing Studies whereby he will be teaching two classes in 2018. Ron Katz, ’16 is also teaching a Continued Studies course. These relationships around individuals help extend the DCI community into schools and programs and create collaborations with faculty that will almost surely grow over the years ahead. This is still best viewed as a work in progress that is not necessarily predictable. In fact, in each case the fellows are engaged in activities that were not planned prior to their arrival and that underscore the value of the DCI program as a flexible and highly personalized one that does not prescribe engagements – but that supports them once developed.

Fellow-Led Community Building:
Perhaps among the most successful ways of community building come from activities the fellows and partners seek outside the formal program per se. This includes shared attendance at Stanford events ranging from academic to athletics to the arts. Considerable interactions also occur among fellows/partners interacting in small and larger groups for travel, book clubs, dinners and social gatherings as just some examples. Other activities bring fellows together to explore shared interests embracing personal and professional issues. These types interactions appear to be highly sustained and clearly are lasting for “more than a year.” They may be among the most important derivatives of the DCI program.

What can be done to improve the approach to “community networking and social engagement” in the short and longer term?
The evolution of the community networking pillar of DCI has benefited from programmatic initiatives that were in the original design, those that emerged during the first three years of DCI and a number that resulted from the creativity and interests of DCI Fellows/Partners, Stanford faculty and students. Given the progress of planned and
unplanned activities and their convergence in amplifying the impact of community networking, it seems prudent to let the current activities and opportunities continue to unfold for the next 2-3 years. At that point, assessing which aspects of the program are core elements and which are supplemental or complementary seems appropriate. It is also likely that other initiatives will be developed that will further progress in community building and that not over-managing this part of the program at this early phase of development is appropriate.

**Wellness**

Health and wellness are evolving terms but both are connected to aligning the lifespan with the health span and to compressing morbidity against the impact of chronic disease and decline, both of which impact the quality of life, lessening of disability and reduction in healthcare and related expenditures. While there is considerable attention given to the biological and genetic predisposition of disease and early death, they account for about 30% of the risk factors. Social factors account for 15% and environmental exposure account for 5%. Importantly, behavior and lifestyle account for 40% of the factors that contribute to health (or avoidance of early death), which means that a focus on wellness can impact the risk for disease and its morbidities through the life journey. Looked at another way, the social determinants of poor health primarily related to a low education, experiencing racial segregation and poverty.

In an ongoing study, Catherine Heaney at Stanford is developing a Wellness Scale. Based on her studies to date, 10 factors correlate with wellness, of which five are the most important and which includes, in a hierarchical rank, social connectedness, lifestyle, stress and resilience, emotions and mental health, purpose and meaning. In addition to these factors, other measures of wellness include physical health, a sense of self, financial security and satisfaction, spirituality and religion and exploration and creativity.

**What are the attributes of an ideal or optimal program?**

At present the US healthcare system is twice as costly as any developed nation and does not achieve superiority in most health outcomes, including longevity. The only parameter in which the US healthcare system is unequivocally superior is in administrative overhead. While there is no doubt that technology and research has improved the diagnosis and treatment of a number of serious diseases, it is also true that a sharper focus on prevention is important in many dimensions. While it is also true that there is debate about which preventive modalities are data driven and cost effective, there is general consensus that some areas are beneficial. These include smoking cessation, mild to moderate alcohol consumption, BMI below obesity thresholds, diet and nutrition (especially the avoidance of sugars and processed foods), exercise (both aerobic and strengthening), sleep (optimally 7-8 hours/day), stress (positive for good, but not for negative stress), mediation, emotional health and spiritual health. There are many other factors that contribute to wellness and as noted above, one of the most importantly defined measures is social engagement.
An important question is how to create a program on wellness that will not only be embraced at the outset but that will become sustained over time as an integral part of the life journey. Given the goal of DCI to align the health span with the lifespan, fostering wellness and then sustaining it over time is important. There is ample data demonstrating that most adoptions of “healthy behavior” (e.g., diet, weight management, exercise (with or without wearable monitors) is transient, often not lasting more than several months. Such staccato approaches to wellness are not likely to have an enduring impact.

Thus, the question at hand is how to develop a wellness program that becomes integrated into the life course of individuals. Clearly it is important to do so in ways that adapt to individual needs, desires, expectations and choices. As noted above, lifestyle and behavior account for at least 40% of health outcomes and thus developing programs that ultimately become integrally related to the life journey is important. As noted, the goal is to include wellness in a multi-prong approach to compressing morbidity. This has individual as well as community and societal benefits. This is not easy to accomplish or even imagine and it will likely be an iterative process. Further, demonstrating impact will take years to decades to demonstrate, underscoring the importance of incorporating longitudinal research as an integral component of the DCI evaluation process (see “Research Agenda for DCI” below).

**How well are we currently achieving the ideal or optimal program?**

This is a work in process and we have been evaluating different components and approaches. While each addition and iteration to the program has been designed to improve its value, this will not always prove true and no matter what, further improvements will be needed. Here is how our “Wellness” pillar has evolved.
<table>
<thead>
<tr>
<th>Year</th>
<th>Health/Wellness Program</th>
<th>Other Adjunctive Programs</th>
<th>Specific Presentations</th>
</tr>
</thead>
</table>
| 2015 | Stanford Medicine Executive Health Service | Health Improvement Program (HIP) courses | *Laura Carstensen, Longevity*  
*Carol Winograd, Women and Aging*  
*Abraham Verghese, The Physician in Society* |
| 2016 | Stanford Medicine Concierge Service | Health Improvement Program (HIP) courses | *Same as above plus:*  
*Randy Safford, Recalibrating Wellness (three-part summer series)*  
*Jane Shaw, On Empathy*  
*Laura Wittman, Death Re-Enchanted* |
| 2017 | Stanford Medicine Concierge Service | Health Improvement Program (HIP) courses | *Laura Carstensen, The New Longevity*  
*Colloquium on Aging led by Laura Carstensen and Tom Rando*  
*Summer Program on Health and Wellness Through the Lifespan – with seven sessions*  
1. Nurturing the Inner Self: Our Microbiome and Nutrition  
2. Longevity  
3. Improving our Musculoskeletal Health and Endurance  
4. Finding Illness Early  
5. Genes, Behavior and CV Heath  
6. Emotional and Spiritual Health  
7. Dementia and its Prevention  
*Colloquium on Religion and Spirituality* |
What can be done to improve the approach to “wellness” in the short and longer term?

There is a continuing need to balance programs focused on individual health and wellness along with activities that address the DCI community as a whole. This balance must also account for programs addressing in wellness and the preservation of health along with ones that address health improvement, including disease and illness intervention. The latter is important for DCI Fellows who are moving to the Bay Area without established access to a healthcare provider and health system. That said, there is a definite focus and commitment by DCI to concentrate on wellness and disease prevention and to develop approaches that make the individual and collective focus on wellness sustainable through the lifespan. This is consonant with the goal of compressing morbidity as first defined by Dr. Jim Fries (Fries, JF Aging, Natural Death, and the Compression of Morbidity. *New Engl J Med* 1980; 202:130-135 and Fries, JF Measuring and monitoring success in impressing morbidity. *Annals of Internal Medicine*. 2003; 139: 455-459). We have made continued improvements each year as noted above. In 2018 we anticipate further progression in the relationship with the Stanford Medicine Concierge Service that includes a greater emphasis on wellness and not simply health. We are also working with the head of BeWell to develop a core program curriculum, coupled with wellness coaches, is being planned.
Some Overall Summary Comments

In both the background materials and program descriptions, we have endeavored to provide the background data that has served as the underpinning of DCI today. We have also described DCI more specifically, including what has been accomplished to date and what remains to be achieved over the next several years. While much work remains to be accomplished before the optimization of DCI is more complete (although it will always remain a work-in-progress) it is also worth noting how quickly the program has evolved from concept to evolving reality in just over four years. While there is much to be proud of, it is important to remain focused on how to better optimize the programmatic elements related to purpose, community and wellness and thus utilize this experience as a springboard for catalyzing the transformation of higher education at Stanford and then, by collaboration, with colleges and universities nationally and globally. While we are still clearly in the early days of programs like DCI, it now seems clear that such programs fill an unmet need and are well timed to the moment and years ahead. To that regard, a Special Report in the “The World in 2018” published by the Economist in December 2018, Barbara Beck comments in an article entitled *Older, Wiser. Intolerance of agism should be the hot corporate cause of 2018:* “But the biggest need is for change in attitudes. Being more careful with language with help (talk of a grey tsunami, for instance, makes older people sound like a problem, not a solution). So would a more enlightened approach to training. Employers often pass over older workers for courses because they think the effort would be wasted. But if older workers do not update their skills, they will perform less well and the prejudice will become a self-fulfilling prophecy. It is now widely accepted that training and education need to be a lifelong endeavor, not a one-time sprint at the beginning of a career. Harvard and Stanford universities have recently introduced one-year programs to prepare high-flyers over 50 for a career change late in life.” One caveat, while DCI has been primarily focused on individuals 50 or older, an increasing number of applicants are now in their 40s and a handful of these have entered the DCI program over the past couple of years. We are assessing whether DCI is the right model for these individuals. But we also believe that the increase in DCI by younger mid-life individuals also reflects increased awareness that transitions earlier in one’s career (40s to early 50s) provides for a longer runway for new endeavors. In any event, this is all part of the changing narrative on role of the university and college for individuals who are – or who approaching – midlife.

In less just over four years DCI has gone from a concept proposal to a successful program that will admit its 4th and 5th cohorts over the next year and by the end of 2018, will have over 175 individuals as active DCI Fellows, Partners, Continuing Fellows and Alumni. By nearly every measure, DCI has been highly successful to date and the global interest in the program as measured by the number of highly qualified inquiries and applications received is evidence of its appeal as well as perceived and real value. While the fellows/partners are enthusiastic about their DCI experience, it is clear that there are a number of areas of improvement that are needed, especially in formalizing the approach to the Purpose Pathway and its impact on individuals. Some of the approaches being considered were noted above.
We have set the somewhat arbitrary timeline for program optimization as 2023, this being a decade following the initial drafting of the program description. At the end of 2017, we are 4.5/10 years into optimization and recognize that even by 2023, the work will not be done and that continued program development and evolution will be necessary as long as DCI exists. Among the practical goals that need to be accomplished before 2023, ideally by 2022 will be the succession of the Founding Director.
Evaluation of DCI: Internal and External Advisory Councils

From its early development in 2013-2014, the DCI Leadership established two advisory councils:

1. The Stanford Advisory Council (http://dci.stanford.edu/internal-advisory-council/) currently includes 17 faculty and staff leaders from across the University. They meet periodically to review updates and progress about DCI and provide advice and guidance on ways to further optimize its functioning within the Stanford community.

2. The DCI Advisory Council (http://dci.stanford.edu/dci-advisory-board-members/) currently includes 24 leaders from around the nation who have committed to providing advice and input to the DCI leadership.

As noted above, the DCI leadership has also benefitted from advice and input from current and alumni of DCI. It is also notable that in the summer-fall of 2013, following the initial meeting with the President and Provost, Phil Pizzo met with 97 members of the Stanford and national communities to review the conceptual ideation for DCI based on its initial formulation and program description. They included 14 Deans and Vice Provosts, 5 members of the University cabinet, 15 faculty and staff leaders, 16 Directors of the Medical Center, 4 Trustees and 10 national leaders who were uniformly enthusiastic in their support for DCI as a potentially groundbreaking program.

At the same time and not unexpectedly, there are many important points of view about what DCI is and what it can become in the future. Many of these views converge but some offer different perspectives. This is understandable at this stage of development of a new project. As noted above, the DCI leadership has been responsive to input and has continued to modify and adapt the program – and is planning additional programmatic modifications and additions going forward. While one of the goals of the DCI leadership is to achieve “program optimization” by 2023 (the 10-year anniversary since the first program overview was composed), it is fully expected that continued and even significant changes will unfold beyond that time based on new insights and the evolving needs of individuals, institutions (including universities) and society.
Continued Assessment of the Financial and Organizational Model for DCI

Now in its third year, DCI is progressing from start-up to transition to more maturity as an entity. By way of context, the original program description for DCI (while long in the ideation phase) was not codified until the spring of 2013. As noted above, it was first presented to the President and Provost in late May 2013 and due diligence with University leaders was conducted during that summer and a proposal for start-up funding brought to the President in October, 2013. With the support received, a nuclear group consisting of the Founding Director and newly appointed Executive Director, Program Manager and Executive Assistant to the Founding Director constituted the initial staff of DCI. The Center on Longevity provided start-up space for the Executive Director and Program Manager and DCI was officially launched in December 2013. In 2015, DCI was comprised of 3.0 FTE (Executive Director, 1.0; Program Manager 1.0, Executive Assistant 0.5 and Founding Director 0.5). On April 2, 2014, the program was announced and an impressively larger number of applicants received that permitted the selection and enrollment of the Inaugural Class in January 2015 (see: http://dci.stanford.edu/fellows-2015/).

Based on programmatic developments and needs, additional administrative support was added in 2016 as 0.8 FTE and by the end of 2016, a 1.0 FTE Associate Director Position was created, bringing the full-time DCI staff to 4.8 FTE. In 2017, an additional Administrative Assistant was added bringing the FTE total to 5.8. Added to this is a 0.3 effort (not a formal position) Faculty Research Director.

At its inception, DCI was administratively affiliated with the Stanford Center on Longevity (SCL), to which it has had a strong academic association. As an affiliated member of SCL, DCI initially purchased administrative services (including finance, web consultant, IT services, space) from SCL. In 2016 DCI was administratively assigned to Continuing Studies and related services emanate from that office including HR and finance. Because of the location of some of the program staff in the Law School and the fact that the DCI Fellow office space is in the Law School, IT services and space is purchased from the Law School. Web support is contracted from an outside vendor.

Moving forward from start-up to a more mature program, the current and future staffing of DCI will need to evolve to meet continued program development at Stanford as well as, over time, the need to further develop the national/global collaborative programs with universities, colleges and community colleges as well as the research infrastructure and investigators needed to fully evaluate the impact of these programs on individuals, institutions and society. Currently, the tuition-based revenue model for DCI defines, to a considerable extent, the size and scope of the personnel who can be employed to support the program. Moving beyond a revenue-constrained model will require new sources of revenue and other models of support, including the creation of endowment and/or expendable fund pools.
The current tuition-based model of revenue and expenses follows:

**DCI Expense Distribution – 2017 Fiscal Year**

**DCI Program Expenses – 2017 Fiscal Year**
These resources support the current staff model but additional funding is needed to optimize this model and also to help with the development of the Collaborative described below.

<table>
<thead>
<tr>
<th>Current DCI Model Based on Current Tuition-Based Revenue Stream 2013-2017</th>
<th>Enhanced DCI Model- Requiring New Funding Sources 2018-2023</th>
<th>Collaborative and Societal Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Direct Functions by DCI Staff</strong></td>
<td><strong>Direct Functions by DCI Staff</strong></td>
<td><strong>Direct Functions by DCI Staff During Start-Up Phase</strong></td>
</tr>
</tbody>
</table>
| • Crafting and Refining the Vision  
• Faculty, University Leadership and Board Engagement  
• Governance and Program Oversight  
• Research Leadership and Services  
• Fellow/Partner Advising, Counseling and Coordination  
• Admission Interviews of Fellows/Partners by FD and ED  
• Coordination of Admissions, including Visa, housing, etc.  
• Program Development (FFD, Transformation, Colloquia, Social Dinners, etc.)  
• Events Management  
• Communications  
• Finance Functions  
• Administrative Functions  
• Clerical Functions | • External Relations  
• DCI Career/Life Journey Coach  
• DCI Wellness Coach  
• Research Director and Staff | • Program Director  
• Finance and Administration  
• Research Director and Support  
• Administrative Support |
| **Purchased Services** | **Purchased Services** |  |
| • Space and Space Management  
• IT Support  
• Web Development and Services  
• Transition Planning for Fellows/Partners  
• Health and Wellness from Stanford Medicine | • DCI-SCL On-campus facility |  |
Assessment of Resources Needed to Sustain DCI for the Short and Long Term

Going forward and as noted above, additional funding sources are needed to further optimize the DCI program as well as to support the broader mission of creating a global collaborative that helps foster the transformation of higher education nationally and globally and that sustains DCI deep into the future. These funds can be from public and private foundations, public funding sources, philanthropy for endowment or expendable funds as well as new revenue streams developed by DCI.

Current needs (which will need further study and elaboration include (this is just a rough estimate that is offered as a placeholder. It will need more careful assessment):
<table>
<thead>
<tr>
<th>Function and/or Need</th>
<th>Annual Expenditure</th>
<th>Direct Funding (Three years of Funding)</th>
<th>Endowment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty and/or Program Leaders</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Faculty Director</td>
<td>$200,000</td>
<td>$600,000</td>
<td>$4 million</td>
</tr>
<tr>
<td>• Executive Director</td>
<td>$150,000</td>
<td>$450,000</td>
<td>$3 million</td>
</tr>
<tr>
<td>• Faculty Devoted to Purpose Pathway</td>
<td>$150,000</td>
<td>$450,000</td>
<td>$3 million</td>
</tr>
<tr>
<td>• Faculty Devoted to Wellness</td>
<td>$150,000</td>
<td>$450,000</td>
<td>$3 million</td>
</tr>
<tr>
<td>• Research Director for DCI and the Collaborative</td>
<td>$200,000</td>
<td>$600,000</td>
<td>$4 million</td>
</tr>
<tr>
<td>Total</td>
<td>$850,000</td>
<td>$2,550,000</td>
<td>$17 million</td>
</tr>
<tr>
<td>Program Development</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Purpose Curriculum</td>
<td>$50,000</td>
<td>$150,000</td>
<td>$1 million</td>
</tr>
<tr>
<td>• Wellness Programs</td>
<td>$50,000</td>
<td>$150,000</td>
<td>$1 million</td>
</tr>
<tr>
<td></td>
<td>$100,000</td>
<td>$300,000</td>
<td>$2 million</td>
</tr>
<tr>
<td>Financial Assistance for 3-5 Fellows/year</td>
<td>$100,000 - $175,000</td>
<td>$300,000- $525,000</td>
<td>$2-3.5 million</td>
</tr>
<tr>
<td>Total Personnel and Programmatic Support</td>
<td>$1,050,000 - $1,125,000</td>
<td>$4,200,000 - $4,425,000</td>
<td>$21,000,000 - $22,500,000</td>
</tr>
<tr>
<td>Facility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• On campus Center</td>
<td>TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Off-campus Residential</td>
<td>TBD</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Facilities</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand Totals</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Moving Beyond DCI: The Transformation of Higher Education Nationally and Globally Could Create New Models for Lifelong Learning and the University of the Future

In addition to enabling Stanford to serve as a model for a university for the future, we propose the formation of an umbrella organization to foster a national dialogue and then collaboration among colleges and universities, nationally and globally. The goal will be to develop program-specific opportunities for lifelong learning that meets the unique needs of local, regional and national communities. It should be noted that over two-dozen colleges and universities have already reached out to DCI to explore program development, and a number are moving forward in developing their own programs. In tandem, we would seek to develop a central data repository that collects longitudinal data measuring the impact of renewed purpose, social engagement and recalibrated wellness from individuals participating in the national/global collaboration. The goal is to test the hypothesis of whether programs fostering midlife education result in more successful life journeys that use fewer medical and social services, which could have national economic and societal impact.

The Principals and Collaborators

1. **Philip A Pizzo, MD**, Founding Director, Stanford Distinguished Careers Institute; Former Dean and the David and Susan and David Heckerman Professor of Pediatrics and Of Microbiology and Immunology, Stanford University

2. **Kathryn Gillam, PhD**, Executive Director, Stanford Distinguished Careers Institute, Stanford University

3. **John Hennessy, PhD**, President Emeritus and Shriram Family Director, Knight-Hennessy Scholars Program and Professor of Electrical Engineering and of Computer Science, Stanford University

4. **Paul Brest, JD**, Professor and Dean Emeritus, Stanford Law School and Lecturer, Graduate School of Business; Former President, William and Flora Hewlett Foundation

5. **Tom Ehrlich, JD**, Adjunct Professor, Graduate School of Education, Stanford University; Former President, Indiana University

6. **Bernadine Chuck Fong, PhD**, Director of Leadership Initiatives and Special Projects, Office of the Vice Provost for Graduate Education, Stanford University; Former President and Professor of Psychology and Child Development, Foothill College
The Proposal (which was submitted to the Hewlett Foundation and approved by the President in November 2017 and the Foundation Board in January 2018):

1. **Host a national dialogue** about the role of higher education in life-long learning opportunities with a specific focus on programs for individuals in midlife. To optimize the dialogue, we propose holding three “Launch Conferences” in 2019 and 2020. Their purpose would be to inform and engage university and college leaders in a conversation about the future of higher education, focusing on the prospect for developing programs for individuals in midlife. Specifically, our objective would be to collaborate in exploring the establishment of programs that foster intergenerational learning and teaching and that create opportunities to renew life and career direction and purpose, develop new communities and colleagues and seek ways to recalibrate personal health and wellness. Our long-term aim is to enhance the societal impact of individuals in mid-life and beyond.

In order to minimize expenditures and optimize participation we would host these meetings as an adjunct to the national meeting(s) of three different organizational stakeholders. We anticipate these would each be about half-day meetings. They would include:

**United States**

a. **Research Universities**: We propose reaching out to the 62 members of the Association of American Universities (AAU), the members of the AAU are listed in Appendix I

b. **Liberal Arts Colleges**: We propose reaching out to the National Association of Independent Colleges and Universities which has over 1000 member colleges as well as the Consortium of Liberal Arts Colleges which is comprised of a smaller number of 70 members.

c. **Community Colleges**: We propose reaching out to the American Association of Community Colleges (AACC) which represents 1200 two-year colleges around the US

**International**

While we envision that the development of collaborative programs with international colleges and universities will commence more formally following our initial overtures within the USA, it is notable that we have already had formal and informal discussions number of international institutions about the prospect for developing a program. Among these are University of Oxford University, King’s College (London), University of Edinburgh, and the National University of Singapore.
Our Principle and Collaborator group (see above) has agreed to help with hosting and coordinating these three separate meetings of different stakeholders. Although we would begin by describing proposed models of opportunity based on the experience generated at Stanford, we recognize that each university and college would explore developing a program that would meet its unique culture and community needs. We are seeking to collaborate and not to franchise. The hope is that different colleges and universities could develop unique educational programs that explored different models of size, duration, scope, etc. That said, it is hoped that they would share their experience and, ideally outcome data in the areas of intergenerational learning and teaching as well as on the triad of renewing purpose, fostering community and recalibrating wellness. We have developed research tools that could be used for this data gathering.

2. **Explore the creation of an umbrella organization.** Based on the number of programs that begin to develop, and with a greater awareness of the resources that would align and unite them, we would explore the creation of umbrella organization that could become a 501c3 and that could provide advice and guidance in coordinating efforts between higher education institutions as well as with and public and private sectors.

3. **Develop a central data repository and related research program** to assess the impact of programs of these programs, individually and collectively, as part of a broad-based longitudinal study. The benefits of this can be determined based on the number of institutions who begin programs and who are willing to share data about longitudinal outcomes.

This proposal was submitted to the President of the Hewlett Foundation and was granted support for the first of these three projects. The funding from the Hewlett Presidential account is $200,000 and will enable the DCI leadership to convene the three noted stakeholder launch conferences in 2019. In follow-up discussions with Larry Kramer, President of the Hewlett Foundation, the DCI leadership will seek matching grants from other foundations to help support the second two objectives of this proposal. That process is now underway.
Moving Beyond Higher Education

An additional goal of DCI and the Collaborative that may form in the next several years is to foster a dialogue about the changing social narrative about aging and the workplace. To help nucleate this effort, we envision selecting representative workplaces where current and prior DCI Fellows/Partners have relationships in order to begin a dialogue and explore new models about the roles of workers of the future across the age span. This would explore how careers can be reimagined and recalibrated during the life cycle. In tandem, we would propose the consideration of new models of collaboration between higher education and the workplace to foster ways to redevelop and retrain individuals from diverse communities, for jobs and positions of the future. Included would be a dialogue with the public and private workplace that imagines new roles for advanced leaders and individuals that have social and community impact. To accomplish this, we would seek to foster the development of transition planning services and opportunities that create new “career counseling offices” and the “matching service” noted above within higher education for individuals in midlife and beyond.
Research Agenda for DCI

The Distinguished Career Institute began at Stanford University as an experiment in 2015 to assess whether midlife education could impact individuals, institutions, and communities by providing opportunities for renewed purpose, social engagement. Like any well-designed experiment, the curriculum and design of DCI was grounded in sound theory and best practices, as well as an extensive literature review and consultation with experts in the fields of Gerontology, Education, Psychology, etc.

As it has been three years since implementation, it is now timely to begin the process of evaluation in order to address the questions posed at the outset, as well as those that have arisen as a result of ongoing observation, community feedback and data collection.

The overall hypothesis to be tested is that providing midlife education in the setting of an institution of higher education would positively impact both the individuals and the institutions. It is further hypothesized that these positive effects on participating individuals would be mediated through creating a platform for continued personal renewal and sense of purpose, fostering a community of scholars and promoting positive health behaviors. The long-term effect of this intervention is expected to be enhanced longevity and compression of morbidity.

The fact that DCI is imbedded in the fabric of the university also provides the opportunity to assess its impact on intergenerational learning. When individuals of different ages, cultural, educational, career and life experiences are placed together in this learning environment, it is hypothesized that it could refocus classroom discussions and interactions and thus challenge faculty and traditional teaching roles in new, growth-promoting ways.

These hypotheses will be tested using mixed methods, both cross-sectional and longitudinal. To evaluate the impact of DCI on individual participants, at three time points throughout the fellowship year and annually thereafter, their responses to scripted interview questions are videotaped and transcribed. In addition to this qualitative component of the assessment, participants complete online surveys, based on standardized instruments, to evaluate the core components of DCI: Purpose; Community and Wellness at entry and exit, as well as annually after completion of DCI. Responses will be compared with those of carefully selected comparison groups (e.g. Encore.Org Fellows, applicants to DCI, etc.). Anthropomorphic measurements and Biomarkers of aging/longevity will be assessed annually, as well.

In addition to the assessment of DCI on individuals and on societal impact, the methodology for assessment of the impact of DCI on Stanford University has been heightened by the analysis of anecdotes provided by fellows and faculty. Observing the course of this unique “natural experiment” and the relationship and interactions between “traditional” students and the DCI Fellows in their classes has led to following studies:
1. Analysis of students’ social networks and their progression. The question posed is whether DCI Fellows become included and how their value is characterized using standard study methodologies.

2. Study of the impact on change in students’ image of older people after joint participation with DCI Fellows in seminar classes.

3. Study of the impact of age diversity on the interactions and outcomes of interactions between fellows and traditional students.

Once the Collaborative Effort (see above Moving Beyond DCI) that engages other colleges and universities, nationally and globally, has been established, population-based longitudinal studies will assess whether the triad of renewed purpose, social engagement and wellness can not only compress individual morbidity but also whether, improving individual performance, such programs can also contribute to a reduction in the need for the medical and social services that are often required during the aging process.