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EXECUTIVE SUMMARY

The Harvard Kennedy School (HKS) Sustainability Plan is a strategic pathway that is specific to the HKS community and grounded in scholarship. A key component of this effort is to broaden the definition of sustainability from its focus on “greening” the HKS campus to a more inclusive focus on inter-generational well-being.

Current research in sustainable development is focused primarily at the global and national level. As a leader in the global community, HKS has the opportunity to join a small group of major corporations and institutions in furthering this research at the scale of local communities.

This report proposes the adoption of a set of nine strategic recommendations for advancing the well-being of the HKS community over the next five years. To better understand the impact of the implementation of these strategies, we recommend the development of metrics to regularly quantify the assets under the control of HKS, monitoring the well-being of the HKS community now and into the future, and the adoption of shadow pricing in financial decision-making processes to account for the full impact of greenhouse gas emissions.

This five-year plan is a first step in an iterative process. Integration into research, teaching, governance, and culture at HKS is critical to the long-term success of the proposed strategies.

Strategic Recommendations

Health and Wellness
1. Develop programs that enable HKS community members to thrive at work/school.
2. Regularly assess the health and wellness of HKS campus community and respond to these assessments with revised programming.

Connecting
1. Improve the quality of travel and commuting data collected and refine the methodology for converting such data into greenhouse gas emissions.
2. Analyze existing practices for connecting people at HKS to better understand the costs and benefits of travel versus electronic communication to the School’s mission and its sustainability goals. Identify and evaluate opportunities for balancing the benefits and costs of various forms of connecting people by members of the HKS community.
Infrastructure and Products
1. Continue to prioritize efficient and low emissions development of existing buildings on campus. Key opportunities include completing consolidation of the central chiller plant in the new Pavilions space, investing in energy data analysis, and developing renewables on campus.
2. Develop an HKS-specific inventory of products on campus that contribute to known negative health outcomes, and implement a plan to eliminate the worst of these chemicals from campus over the next five years.
3. HKS should develop, review, and revise its disaster mitigation and business continuity plans to reflect a ‘quick recovery’ strategy that aligns and builds upon forthcoming guidance from University and municipal resilience resources.

Nature and Ecosystems
1. Develop and implement a natural capital plan that supports well-being by reducing climate degradation through reduced greenhouse gas emissions and enhancing health through a comprehensive vegetation strategy. This plan should focus on supporting biodiversity through landscaping renewal in the Pavilions project, campus-wide microhabitat design, and providing access to vegetation indoors.

Governance and Culture
1. Establish a formal commitment led by senior leadership to advance sustainability at HKS that includes funding, staffing, and a management commitment to allow people to incorporate sustainability into their daily tasks.
1.0 OVERVIEW

Key Finding
Sustainable development, as presently understood by scholars and practitioners, is much more than “green” growth. The overall goal for sustainable development is now understood as one of enhancing inclusive social well-being: the well-being of people here and now, but also elsewhere and later. The ultimate means for promoting such sustainable development is now understood to be one of properly managing the underlying base of capital assets on which current and future generations can draw to shape the well-being that they want for themselves, while assuring that their gains do not come at the expense of the prospects of people in other places and times.

Key Recommendation
HKS should adopt a goal of pursuing its mission in a way that promotes sustainable development, seen as inclusive social well-being. It should seek to advance such sustainability by managing and measuring its full range of assets in a manner most likely to enhance the well-being of people here and now, elsewhere, and in the future. The University has advanced this position with the launch of the Harvard University Sustainability Plan, and HKS builds on that evolution with this Plan.

The Harvard Kennedy School (HKS) is uniquely positioned to take a leadership role in advancing sustainability at the University and in comparable organizations because of its mission to train enlightened public leaders and to generate ideas that provide solutions to society’s most challenging public problems. By drawing on cutting edge research and practical experience in sustainable development, HKS can build upon the baseline goals stated in the Harvard Sustainability Plan to create replicable models for pursuing sustainability at Harvard and in comparable organizations. In particular, HKS should formulate its sustainability goals in terms of advancing an inclusive vision of social well-being, and should pursue those goals through a comprehensive strategy for managing its impacts on society’s productive assets. The HKS Sustainability Plan is an evolutionary document that highlights broad strategies to be further developed and implemented over the next five years.

HKS is the first School at the University to develop a long-term sustainability plan since President Faust introduced the Harvard University Sustainability Plan in October 2014. In 2015 HKS convened a committee, co-chaired by Harvey Brooks Professor William Clark and HKS Chief Financial Officer Janney Wilson, to research, discuss, and propose strategies that further the sustainable development of HKS.

This report focuses on the well-being of the “HKS community” – its current students, faculty, staff – and the assets under that community’s immediate control. The committee grappled with the challenge of defining sustainability specific to the HKS community, while recognizing that all local communities are
embedded and interact within a larger world. This plan seeks to account for the School’s relations with the broader community of what we will call “HKS stakeholders” – HKS Alumni, other Schools at Harvard, and those in the surrounding towns and communities in which members of the HKS community live, work and interact. Finally, we seek to be sensitive to, but realistic about, our connections with the larger global community.

**Sustainability: Well-being and Asset Management**

Since 2001, sustainability efforts at Harvard have focused on campus environmental efforts. The 2014 Harvard University Sustainability Plan goes beyond an environmental focus to align with trends in modern scholarship and practice in sustainable development by focusing on the well-being of people.¹

The HKS plan builds on this foundation by creating a strategy to attain and measure well-being that can be replicated across the University. In the perspective adopted here, environmental conservation is an important and often neglected means for promoting sustainability, but the ultimate end or goal of sustainable development is social well-being, not environmental conservation.

**Well-being**

The ultimate inspiration to act sustainably is to assure that the well-being of people in the here and now is not attained by reducing the well-being of people elsewhere and, especially, in the future. Well-being has been defined in many ways. The Organization for Economic Co-Operation and Development (OECD) used surveys and focus groups to characterize contemporary well-being in terms of eleven constituents: housing, income, jobs, community, education, environment, civic engagement, health, life satisfaction, safety, and work-life balance. Gallup’s research has found well-being for many people to mean thriving in five key areas: purpose, social, financial, community and physical. A common feature of many characterizations of well-being is a person’s capability to thrive in ways that s/he finds to be most important.² For many people, this involves meeting basic needs and having a level of autonomy over other aspects of their lives including education, political participation, goal setting, etc.

Independent of the precise characterization that individuals may place on well-being,** sustainable** development has come in recent years to be conceptualized in terms of **inclusive** well-being, the aggregate of well-being of individuals across space and multiple generations. In particular, sustainable

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development has been defined as development trajectories, past or projected, in which inclusive well-being does not decline over intergenerational time.³

**Asset Base**
The future orientation of sustainability thinking immediately raises the same problems encountered in any long-term social benefit cost analysis: How can we deal with the fact that we don’t know how future generations will define their well-being? Scholars grappling with this challenge have shown that over a wide range of conditions, the potential for inclusive social well-being is tracked by aggregate measures of the productive assets on which people could draw to shape their well-being. The “productive assets” available to society were originally thought of as their “land, labor and capital.” Today, the productive assets relevant to sustainable development are generally thought to include a somewhat broader set of capital assets: natural capital, human capital, manufactured capital, social capital and knowledge capital.

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**Asset Base for Societies:**
- **Natural Capital:** Land, water, biotic, mineral resources; Climate and atmosphere; biodiversity; etc.
- **Human Capital:** Population (size and distribution) and the health and education of its members
- **Manufactured Capital:** Buildings (homes, factories & their products); Infrastructure (transport, energy, information)
- **Social Capital:** Laws, norms, rules, customs; institutions (political, judicial, economic); trust
- **Knowledge Capital:** Codified understanding (conceptual, factual, practical, know-how); Research and development capacity

We therefore follow contemporary scholarship and practice in conceptualizing sustainable development for HKS in terms of the School’s contributions to the inclusive well-being of its relevant communities, and thus to the social value of the those communities’ aggregate capital assets. In practical terms, this means that the strategy for sustainable development of HKS should be thought of as a strategy of asset management.

It should hardly be surprising that for an organization with the mission of HKS, its principal contributions to sustainable development are likely to come from its contributions to teaching and research, i.e. to the human capital (education) and knowledge capital of its immediate community and the world at large. This Committee was not charged with exploring how HKS teaching and research might better contribute to broad social goals of sustainable development, however useful such an exploration might be for the School or Harvard in general. Rather, we were asked to explore how the teaching and research that HKS

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does perform in pursuing its central mission might be carried out in ways that do not undermine, and indeed enhance, the other assets – natural capital, manufactured capital, the health dimensions of human capital, and social capital – which together with human and knowledge capital generate the School’s ultimate contribution to sustainable development.

Report Structure
The remainder of this report is divided into three sections: strategic overviews and recommendations for key issues identified by the committee through research and discussion, a pathway for the development of metrics for well-being and the asset base, and a collection of appendices that provide supporting details and clarification.

Section 2 focuses on five key categories that represent an evolution of the University-wide sustainability plan that are altered slightly to account for conditions specific to HKS: Health and Wellness, Connecting, Infrastructure and Products, Nature and Ecosystems, and Governance and Culture. In addition to the major recommendations, each section highlights tactical opportunities for meeting the proposed strategies and a profile of HKS’s alignment with the Harvard Sustainability Plan and current progress.

Section 3 discusses the importance of developing a comprehensive measurement program and corresponding valuations of the HKS asset base and community well-being.

Strategic Recommendations
Across all the categories, nine Strategic Recommendations are identified as critical to advancing sustainable development at HKS. Tactical recommendations intended to support the strategies highlighted below are located throughout Section 2.

Health and Wellness
1. Develop programs that enable HKS community members to thrive at work/school.
2. Regularly assess the health and wellness of HKS campus community and respond to these assessments with revised programming.

Connecting
1. Improve the quality of travel and commuting data collected and refine the methodology for converting such data into greenhouse gas emissions.
2. Analyze existing practices for connecting people at HKS to better understand the costs and benefits of travel versus electronic communication to the School’s mission and its sustainability goals. Identify and evaluate opportunities for balancing the benefits and costs of various forms of connecting people by members of the HKS community.
Infrastructure and Products

1. Continue to prioritize efficient and low emissions development of existing buildings on campus. Key opportunities include completing consolidation of the central chiller plant in the new Pavilions space, investing in energy data analysis, and developing renewables on campus.

2. Develop an HKS-specific inventory of products on campus that contribute to known negative health outcomes, and implement a plan to eliminate the worst of these chemicals from campus over the next five years.

3. HKS should develop, review, and revise its disaster mitigation and business continuity plans to reflect a ‘quick recovery’ strategy that aligns and builds upon forthcoming guidance from University and municipal resilience resources.

Nature and Ecosystems

1. Develop and implement a natural capital plan that supports well-being by reducing climate degradation through reduced greenhouse gas emissions and enhancing health through a comprehensive vegetation strategy. This plan should focus on supporting biodiversity through landscaping renewal in the Pavilions project, campus-wide microhabitat design, and providing access to vegetation indoors.

Governance and Culture

1. Establish a formal commitment led by senior leadership to advance sustainability at HKS that includes funding, staffing, and a management commitment to allow people to incorporate sustainability into their daily tasks.
2.1 HEALTH AND WELLNESS

Key Finding
Research confirms that a healthy and happy workforce is the foundation of a productive and thriving organization and that health “swamps the value of all other forms of capital assets” for achieving and maintaining inclusive well-being. While HKS has invested in employee wellness programs, the community participation rate and the benefits to the community have not been comprehensively measured.

Strategic Recommendations
1. Develop programs that enable HKS community members to thrive at work/school.
2. Regularly assess the health and wellness of HKS campus community and respond to these assessments with revised programming.

HKS Strategic Profile
Providing socially vibrant, supportive, and healthy environments is paramount to the health, wellness, and productivity of the campus community. Businesses such as Google, Procter and Gamble, Apple, Unilever, University of California L.A., and other leading organizations have realized that creating these types of environments leads to not only better business outcomes but also increased well-being and better life outcomes for its community members, the ultimate goal of sustainability. This section of the plan highlights opportunities for HKS to directly increase the health and wellness of its community while delivering on the HKS mission, enhancing the student experience, and connecting to faculty research. Building materials and products plus opportunities for local exposure to nature, both of which greatly impact the health and wellness of the campus community, are explored in subsequent sections of this report.

Health and Wellness
HKS has a profound ability to promote sustainable development by enhancing the health and wellness of the campus community as personal well-being includes the ability to be healthy and thrive professionally. A strong body of research states that the “quality of work environments matter for worker’s health.” Creating a social and supportive work community that encourages a sense of purpose and healthy habits such as smoking cessation, stress management, physical activity, taking earned time off, and financial security is good for our people\(^5\), our mission, and ultimately the world.

Fostering a healthy community also means identifying programs that support the mental well-being of the community. Depression is a growing problem and is now one of the top one or two causes of disability for most regions of the world.\(^6\) In the U.S., the burden of disease from depression is rising and substantial. According to one study, 6.4% of people were found to “have an episode of major depressive disorder resulting in an average of five weeks of lost work productivity” in the year of the survey.\(^7\) Costs associated with this include healthcare, absenteeism, and presenteeism, which is the act of coming to work while unwell. In total, depression was “estimated to have an economic burden of $26.1 billion in medical costs and $51.5 billion in indirect workplace costs (absenteeism and presenteeism) in the U.S.”\(^8\)

HKS offers a wide arrange of health and wellness programs to staff, students, alumni, and faculty, including discounted gym memberships, access to the Employee Assistance Program, discounts on massage and exercise classes through the Center for Wellness, etc. It was also one of the first Schools at Harvard to require a tobacco-free campus. Yet, our committee found that local awareness of these programs is low and participation in and impact of these wellness programs is not currently known or tracked. Barriers to tracking these efforts are predominantly staff time to gather and assess data and potential costs associated with additional programming. Barriers to participation in these programs include ability to take time during the day to participate, either because of work load or manager support, as well as access to infrastructure (e.g. the opportunity to shower before coming back to work).

Food
Food policy is at the forefront of current national debate with the renewal of the farm bill and the obesity epidemic facing America. More students and faculty are researching the effects of our global food network on climate change, social justice, and health. HKS’s greatest impact in this sector beyond our research and teaching will come from leading by example in three key ways. The first is to directly


\(^8\) McTernan, et al. (2013). Depression in the workplace: An economic costs analysis of depression-related productivity loss attributable to job strain and bullying.
offer foods in HKS café that are healthier for those who eat them, have lower environmental impacts, and are raised and harvested humanely. The second is to encourage consumption of such diets. The third is to create opportunities for students to interact with food policy on HKS campus and utilize HKS business practices as a case study for understanding global implications of our food choices for sustainable development.

Due to the relatively small size of HKS, direct impact on environmentally significant emissions or pesticide reduction through HKS procurement policies cannot be large; however the networked impact opportunity from educating an influential community is almost certainly substantial.

The committee identified a number of areas in which these three strategic approaches to promoting sustainable development through food consumption at HKS could be pursued. These should be further studied, and the results prioritized and publicized. Examples include the decision on how much red meat\textsuperscript{9,10} to offer (related to health, GHG emissions, and resource intensity), how much priority to give organically produced foods, and the relative importance of fair trade and other practices that protect worker’s health and ability to earn a living wage. Research also demonstrates that highly packaged goods (e.g. bottled water as opposed to tap) and goods that require additional processing (e.g. canned, frozen, or highly-processed foods) are more environmentally destructive and less healthy.\textsuperscript{11}

HKS has started to provide healthier food options through their contract with Harvard University Dining Services (HUDS) as well as making fresh foods more accessible to staff through hosting Community Supported Agriculture (CSA) pick up locations. These healthier options are offered on HKS’s main campus, with limited options available at 124 Mount Auburn Street and other satellite locations. Current efforts include:

- organic offerings (very small amount)
- vegetarian and vegan offerings
- local products when possible
- visible nutrition information
- emphasis on lean proteins, healthy fats and oils, and lower sodium
- array of fruit and vegetable offerings
- 2 CSA pick-up locations at HKS main campus and 124 Mt. Auburn Street


12
Key Recommendations

Strategic Recommendations
1. Develop programs that enable HKS community members to thrive at work/school.
2. Regularly assess the health and wellness of HKS campus community and respond to these assessments with revised programming.

Tactical Recommendations
1. Review and reinvigorate the community’s involvement in wellness programs, including mental health and stress reduction, by increasing visibility of and access to these offerings and measuring the benefits to the community on a regular basis.
2. Utilize HKS managers to foster a culture that emphasizes wellness as one dimension of the School’s commitment to sustainable development.
3. Launch an educational campaign about the nutritional, environmental, and social impacts of their food choices through clear labeling for students, staff, and faculty.
4. Assess the affordability of healthy food choices at HKS and consider subsidizing some options.
5. Investigate opportunities to reduce the use of highly processed and packaged food and beverages. Examples include installing water filtering stations, increasing fresh vegetable purchases, etc.
6. Continue to support best practice data gathering from leading organizations on wellness.

Quick Wins
1. Launch the health and wellness plan goals by distributing a well-being survey to HKS students, faculty, and staff to establish a 2015 health and wellness baseline.
2. Conduct a Health Impact Assessment of the HKS campus, through a collaboration with a Graduate School of Design professor.
3. Increase the community’s social connectivity and encourage exercise before, after, and during the work day by creating a walking route around the campus perimeter with marked distances and develop engagement programming to encourage use.
# Harvard Kennedy School Alignment with Harvard University Sustainability Plan

Current HKS Status with regard to University-wide goals, standards, and commitments

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<tr>
<th>FY16</th>
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<tr>
<td>☐ Understand local participation in Healthy Harvard.</td>
<td>☐ Implement sustainable &amp; healthful food standards.</td>
<td>☐ Increase participation in and access to Healthy Harvard programs.</td>
<td>☐ Reduce HKS exposure to toxic chemicals with a special focus on the natural and built environment, indoor air quality, furnishings and cleaning products.</td>
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<tr>
<td>☐ Develop a plan for eliminating exposure to Chemical Flame Retardants in furniture and the built environment &amp; Mercury via CFLs on campus.</td>
<td>☐ Implement campus plan for eliminating exposure to Chemical Flame Retardants &amp; Mercury via CFLs on campus.</td>
<td>☐ Achieve compliance with Sustainable and Healthful Food standards</td>
<td>☐ Identify and track high-risk chemicals in targeted building materials used on campus, using Health Product Disclosures via LEED v.4</td>
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<tr>
<td>✓ Achieve Smoke Free Campus</td>
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* The actions relating to chemical flame retardants and exposure to chemicals is listed in “Health and Wellness” in the University-wide plan, but in the “Infrastructure and Products” category in the HKS Sustainability Plan. Please see Section 2.3 for HKS specific recommendations in this area.

- ✓ Done
- ○ In progress
- ☐ To do
Key Finding
Interaction with stakeholders across the world is critical to the success of HKS’s mission, yet the implications for sustainability of how these connections take place are understudied and almost certainly large. According to preliminary research, air travel by HKS faculty and staff is responsible for at least as much emissions of greenhouse gases as are all activities relating to our buildings and grounds. The School, like Harvard more generally, has only begun to monitor and does not yet report these and other travel related emissions. Programs need to be developed to identify and evaluate alternative options.

Strategic Recommendations
1. Improve the quality of travel and commuting data collected and refine the methodology for converting such data into greenhouse gas emissions.
2. Analyze existing practices for connecting people at HKS to better understand the costs and benefits of travel versus electronic communication to the School’s mission and its sustainability goals. Identify and evaluate opportunities for balancing the benefits and costs of various forms of connecting people by members of the HKS community.

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12 HKS air travel emission estimates provided in this report are based on a conversion of total dollars spent on air travel in FY14 according to Harvard Strategic Procurement as indicated through departmental coding. The total dollars spent were converted to total mileage flown using US DOT data on $/mile for domestic flights originating from Boston in 2014. Total mileage was converted to emissions using a MTCDE/mile factor as provided by the UK Department for Environment, Food & Rural Affairs for long haul coach travel, which is the lowest emissions factor per mile provided. Business and first class emissions factors are up to four times as intensive as long haul coach travel. The accuracy of our emissions calculations are largely dependent on the accuracy of these assumptions, and more accurate data collection is needed in order to increase the confidence level of these numbers, particularly as it relates to the distance and type (first class, coach, etc.) of air travel at HKS.
HKS Strategic Profile
HKS’s mission has always had a strong component of connecting people, usually via physically moving them so they can interact directly with one another. Other means of connecting have long involved moving the printed word in addition to people. More recently we have seen an explosion of electronic forms of connecting ranging from phones, faxes and the internet to telecommuting and massive open online courses (MOOCs). It is clear that HKS must do a great deal of connecting around the world to achieve its mission, but how HKS does this has significant implications not only for the School’s ability to achieve its core missions but also for its ability to meet its sustainability goals. In particular, physical travel in almost all of its forms involves significant damage to both natural capital, through polluting emissions from fossil fuels, and human capital through pollution and stress.

The Committee considered the first two forms of “HKS connecting” activities listed below, but deferred for later study the 3rd and 4th.

1. The strategic work of connecting members of HKS community – students, staff and faculty – with others outside of the School in pursuit of the School’s mission. The immediate purposes of such connections include such diverse activities as teaching, research, advising, networking, and fundraising. While physical travel is often involved in such “connecting,” electronic options (e.g. videoconferencing) are increasingly available.

2. The daily task of getting HKS staff, students and faculty together for each day’s work of the School. This is generally thought of as physical commuting but could also involve incentives for members of HKS community to live nearer the campus, flex time arrangements and telecommuting.

3. The work of bringing the School and each year’s group of new students together in teaching environments. This has traditionally meant moving students to the greater Cambridge area for the period of their enrollment or moving faculty to other places where students can be assembled for “short courses.” Recent innovations in distance learning are changing the nature of these connections.

4. Personal activities of members of HKS community including but not limited to recreation, tourism, family visits, and other non-HKS related travel.

The Committee sought to advance the process of helping HKS to carry out data-based evaluations of the tradeoffs involved in how much, and what kind, of connecting it does in pursuit of its mission and sustainability goals. Our principal finding is “connecting” belongs among the top three issues HKS should be addressing in the context of HKS Sustainability Plan due to the magnitude of their impacts on greenhouse gas emissions, and the relative immaturity of efforts to address those impacts.

Connecting via Travel
Our greatest surprise was the magnitude of damaging emissions related to “official” travel by faculty and staff of the HKS community. While currently available data is incomplete and could be substantially improved, our preliminary indications suggest that our emissions for air travel are roughly equivalent to emissions resulting from all building utility consumption at HKS. This data suggests HKS has an
opportunity to promote sustainable development through better understanding and managing its connecting activities.

Harvard University, like most organizations, focused its initial energy and greenhouse gas reporting around the relatively easy to assess building related activities which represent our official Scope 1 and 2 emissions.\textsuperscript{13} Scope 3 focuses on indirect emissions related to purchased or acquired goods and services, including but not limited to travel, are just beginning to be understood. Scope 3 data is harder to collect,

\begin{figure}[h]
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\includegraphics[width=\textwidth]{hks_fy14_emissions_estimates}
\caption{HKS FY14 EMISSIONS ESTIMATES}
\end{figure}

\textsuperscript{13} “Building related activities” are those included in official “Scope 1 + Scope 2” emissions sources. Scope 1 contains all direct emissions from operations that are owned or controlled by the reporting company (e.g. burning natural gas in a boiler owned by Harvard). Scope 2 is indirect emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company but generated by a third party (e.g. electricity used by Harvard but generated by a utility provider). The travel related emissions we cite here are part of the Scope 3, defined as indirect emissions related to purchased or acquired goods and services. Harvard’s official goal of reducing greenhouse gas emissions 30% below 2006 levels by 2016 addresses only Scope 1 and 2 emissions.
is sometimes of limited accuracy, and requires the cooperation of third parties including suppliers, contractors, customers and other business partners. As a first step to address the “connecting” issue, the University is now tracking some travel emissions with a commitment to reporting them annually through the Harvard Sustainability Impact Report. HKS should at a minimum participate in this effort, but could lead by adopting a method for tracking air travel at the local level that could be replicated across the University and in the broader community. Local best practices emphasizing the importance of accurately and consistently reporting travel practice will be paramount.

**Connecting on Campus**

The second major focus of the Committee’s work in connecting people involved analysis of the daily task of getting HKS staff, students and faculty together for each day’s work of the School. Mostly, this is done by physical commuting with its potential toll of pollution and stress, though various flex time, time shift and telecommuting options are increasingly being used. The impact of commuting on HKS emissions profile is not fully understood at this time, though an earlier study evaluating University-wide practices determined commuting represents 4,616 MTCDE in annual emissions. As HKS is approximately 4.4% of the total population of the University, this would suggest that the total emissions attributable to HKS is only ~200 MTCDE. From an emissions perspective, improvements to commuting practices will be significantly less impactful than opportunities related to air travel and utility emissions.

While it is not a significant driver of emissions, changes to daily commuting habits can lead to better health and wellness outcomes. HKS already has relatively high rates of sustainable transportation use by its commuters compared to the University as a whole, though less than half of HKS faculty and staff utilize public transportation or biking benefits provided through the Harvard CommuterChoice program. It is important to note that people who walk to HKS as their daily commute would not be represented in these figures. HKS is improving infrastructure to support sustainable commuting behaviors. The HKS campus is already home to one Hubway station that houses 12 bikes for short term rent at rates subsidized by Harvard, and the Pavilions project will expand bike parking and add new long term, weather resistant options.

The Committee could not mobilize any reliable data on the extent to which flex-time, time shift, or telecommuting options are or could be utilized by members of the HKS community. Nor could we discover systematic assessments of the non-GHG benefits (e.g. lower stress) that would likely accompany changes in the way that HKS connects students, staff and faculty with the School on a daily basis. Such information is needed as a foundation for a defensible strategy of managing commuting and related day to day connection options for HKS. Collecting these metrics—at least enough to estimate bounds for the likely impact of current practices—should be a priority.

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**Video-Conferencing and other ICT Solutions**

More generally, the extent to which students, faculty, and staff at HKS and University-wide utilize videoconferencing and other information and communications technology (ICT) systems to complement or replace physical travel is not well known and deserves further study. The opportunities to reduce negative natural capital and health impacts from physical travel are increasing with the continued development of low-cost ICT, and the savings are substantial. Research indicates there will need to be careful consideration by individuals within the HKS community to determine the conditions under which the reduced emissions and stress resulting from the use of ICT systems will outweigh the Human, Social, and Knowledge Capital benefits that result from experiential travel and face to face meetings. Of note, the Pavilions campus transformation project incorporates numerous ICT elements in new classrooms, meeting rooms and team rooms.

**Key Recommendations**

**Strategic Recommendations**

1. Improve the quality of travel and commuting data collected and refine the methodology for converting such data into greenhouse gas emissions.
2. Analyze existing practices for connecting people at HKS to better understand the costs and benefits of travel versus electronic communication to the School’s mission and its sustainability goals. Identify and evaluate opportunities for balancing the benefits and costs of various forms of connecting people by members of the HKS community.

**Tactical Recommendations**

1. Assess the existing infrastructure for telecommuting and videoconferencing on-campus; continue to introduce appropriate infrastructure in future building projects.
2. Develop and pilot best practices for tracking official transportation and commuting travel campus-wide.

**Quick Win**

1. Develop an educational campaign that informs HKS community about the scale and impact of their travel and other choices for connecting.
### Harvard Kennedy School Alignment with Harvard University Sustainability Plan

Current HKS Status with regard to University-wide goals, standards, and commitments

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<td><strong>COMMUTING AND TRAVEL</strong></td>
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<tr>
<td>□ Track Scope III greenhouse gas emissions beyond air travel and commuting.</td>
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<td>♦ Maintain and continuously improve sustainable transportation opportunities.</td>
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<td></td>
<td>♦ Increase bikeability and safety of HKS campus, with goal of gold-level Bicycle Friendly University status by 2020.</td>
</tr>
<tr>
<td>✓</td>
<td>Done</td>
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<td>In progress</td>
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2.3 INFRASTRUCTURE AND PRODUCTS

Key Findings
1. To reach or exceed the University-wide greenhouse gas reduction goal of 30% by 2016, HKS must reduce the emissions of its existing campus infrastructure an additional 23% after accounting for the addition of the Pavilions.
2. Certain classes of chemicals likely used at HKS are identifiable and known to result in negative health outcomes for those exposed.\(^\text{15}\)
3. The riverfront location of the HKS campus poses a significant flooding threat during extreme weather events.

Strategic Recommendations
1. Continue to prioritize efficient and low emissions development of existing buildings on campus. Key opportunities include completing consolidation of the central chiller plant in the new Pavilions space, investing in energy data analysis, and developing renewables on campus.
2. Develop an HKS-specific inventory of products on campus that contribute to known negative health outcomes, and implement a plan to eliminate the worst of these chemicals from campus over the next five years.
3. HKS should develop, review, and revise its disaster mitigation and business continuity plans to reflect a ‘quick recovery’ strategy that aligns and builds upon forthcoming guidance from University and municipal resilience resources.

HKS Strategic Profile
The ways in which HKS constructs and maintains its buildings and procures equipment and consumables are key to the execution of HKS mission. However, they have a correspondingly large impact both on the human capital and the natural assets that are the foundation for sustainable development. Interactions

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between HKS community and campus buildings and products are complex, broad in scope, and significantly affect the current and long-term well-being of the community.

This section covers topics that represent HKS owned or operated buildings, materials, and products. First we examine the impact of building design, construction, and operations on occupant well-being and the global community, notably via climate change. Second, we look at how the materials we bring into HKS campus, from furniture to cleaning products to paper, impact the resources required to create them and the health of their users. Lastly, we assess measures to reduce the likelihood that HKS community and stakeholders are harmed or disrupted by major storm events and other disasters that are expected to increase in frequency as global climate change continues to advance.

Utility Consumption and Emissions
Heating, cooling, and powering the buildings that HKS owns and leases results in the largest known source of greenhouse gas emissions attributed to the School. Emissions of GHGs and other pollutants from utility use are driven by two factors: consumption at the buildings themselves and the efficiency of the supply. HKS relies heavily on external utility providers to provide heating and electricity to the campus. While there are opportunities for on-campus renewables that should be pursued, the limitations of current renewable technology make it highly unlikely for HKS to produce as much energy as it consumes on campus. As a result, HKS has limited opportunities to alter the greenhouse gas emissions of its energy supply, and should instead focus on reducing the energy demand of its owned and leased facilities.

![GHG Emissions at HKS](image-url)
Significant progress has been made towards reducing emissions at HKS between FY06, the reference date for Harvard’s GHG reduction goal, and the start of the Pavilions project. Despite state of the art designs for the Pavilions, however, the additional consumption resulting from campus growth in that project is anticipated to elevate total campus emissions by nearly 25% from FY14 levels.

**Building Energy Demand**

While progress has been made in reducing the energy use intensity (EUI) of HKS owned properties in recent years, the associated chart highlights that the energy density of most buildings owned or leased by HKS could possibly be improved when compared to both the median and top performing office and classroom buildings University-wide.  

**FY14 ENERGY USE INTENSITY COMPARISONS**

(kBtu/ft²)

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16 “Harvard Median” and “Harvard Top 10%” site intensities are derived from an internal evaluation of 147 Harvard buildings' energy use in calendar year 2014 that are classified as either “Classroom” or “Office” in our space management system as reported through HARA. All of HKS facilities are similarly classified as either “Classroom” or “Office” in this system. Harvard outperforms the New England regional average in these categories, as the combined mean site intensity of “Office” and “Education” building types in the 2003 Commercial Buildings Energy Consumption Survey is 101.4 kBtu/sf.
HKS can best contribute to further reducing its campus infrastructure emissions by reducing energy demand in its owned and leased existing building portfolio. Reducing the energy consumption at Belfer, Taubman, and Littauer alone to the Harvard median EUI would realize over 15% in energy savings across the entire HKS campus even after taking into consideration the estimated energy use from the Pavilions. Further investigation is required to determine if it is possible to meet or exceed that target, but the recommendations provided below are likely to provide some savings beyond current operating practices.

HKS performed comprehensive energy audits on the four main campus buildings in 2009. A significant portion of the identified energy conservation measures from that report have been implemented. However, the tools and capabilities of energy data analysis and evaluation systems have developed substantially over the past few years. HKS should re-evaluate opportunities to implement strategies such as ongoing commissioning, enhanced control systems and dashboards, and benchmarking as a means for achieving greater energy reductions without significant capital renovations.

**Renewable Energy**
Options for integrating renewable energy, including both solar electricity and solar thermal panels, into the Pavilions project were investigated by the design team and balanced against other uses such as vegetated roofs for habitat creation and rooftop locations for critical mechanical equipment as a resilience measure. The current plans for the Pavilions include a solar-ready roof, which is a roof that is structurally capable of handling the weight of the panels and includes conduit for connecting the panels with the building’s electrical system. The installation of solar photovoltaics is not included in the Pavilions construction at this time. The committee recommends funding the installation of these renewables and studying the existing building rooflines for HKS owned facilities for suitability of additional renewables on campus.

**Water**
Ensuring that water supplies remain healthy, abundant, and economically accessible is an important goal for HKS, but climate change projections indicate increased precipitation and storm intensity is likely for New England. This suggests HKS should emphasize stormwater mitigation over reductions in potable water use as the primary water issue to be addressed. Analysis of water use on the primary HKS campus as part of the Pavilions design process indicated the largest driver of potable water use on campus is associated with make-up water for the cooling system.

**Materials and Infrastructure - Health**
Research is increasingly showing that the design of our built environment and the materials, products, and equipment we use inside may contribute to or deteriorate our health in a significant way. HKS has the ability to shape the indoor environments that are provided to students, faculty and staff as well as procure materials and associated services that promote sustainable development goals.
Chemical Composition of Materials

There is still much to be learned about the composition of materials we are exposed to every day, but there is already a robust scientific basis for identifying and removing certain classes of chemicals of concern wherever possible:

- Chemical Flame Retardants
- Highly Fluorinated Chemicals
- Antimicrobials
- Bisphenols and Phthalates
- Organic Solvents
- Heavy Metals

These chemicals exist in everything from our building products to cooking and cleaning materials and even our clothes. While it may not be realistic to remove all chemicals of concern in the short term, HKS has an opportunity to lead the University in developing a robust tracking and reduction strategy to be implemented on campus.

Building Design

People spend approximately 90% of their time indoors, and research indicates that access to natural light, background noise levels, ventilation, ergonomics, and other environmental factors affects health, wellness, and productivity. There is now a building design, construction, and operations certification path through the WELL Building Standard that specifically addresses these relationships and should be reviewed by HKS for applicability in its own buildings.

Materials and Infrastructure - Environment

The built environment and the materials used inside them affect not just the health of the occupants but the whole planet. Life cycle assessment, a technique of analyzing a material’s impact from extraction through use to disposal, is yielding greater knowledge about the embodied energy and associated greenhouse gas emissions of the products used daily. HKS has an opportunity to request or require suppliers to share greater detail about the composition and processes required to deliver products to campus, and even greater control over how electronics, recyclables, compost, and general waste are disposed of on campus.

Scope III Emissions - Procurement

Similar to Scope III emissions associated with travel, more research is needed to better understand the impact of HKS purchasing and procurement on upstream emissions from vendors, manufacturers and suppliers. Due to the complexities of tracking these emissions, accurate reporting of the scale of these emissions is unavailable at this time. The University’s Office for Sustainability is working to develop reporting methods for all Scope III emissions, and HKS has an opportunity to lead in developing these metrics.
**Waste**

The biggest opportunity for reducing the environmental impact of waste at HKS is through better understanding of the drivers of e-waste generation and the implementation of improved disposal practices. Significant progress in municipal waste reduction has already occurred, with approximately 25% fewer pounds of total waste overall and per capita in FY14 when compared to collections in FY06. Additionally, the total waste that is sent to landfills has decreased over 40% in the same time span through increased diversions to composting and recycling facilities.¹⁷ Potential locations for additional compost bins should be evaluated.

When considering IT products and their waste streams, HKS has a robust strategy that includes the following practices: a preferred vendor that meets sustainability criteria, computers are typically leased rather than purchased resulting in greater reuse potential, and purchased computers and phones are recycled via a take-back program. However, technology coming onto campus that could potentially become e-waste is not currently well-tracked and should be a priority of focus in the near future. Tracking these potential waste streams will allow HKS to better understand its waste footprint and to set goals for e-waste reduction.

**Resilience and Risk Mitigation**

Harvard University is working with Cambridge, Boston, and other subject matter experts to develop a climate preparedness plan for buildings and critical infrastructure by 2016 and a University-wide Campus Resilience Plan by 2020. Similar efforts are underway to provide risk assessment and mitigation guidance by Boston and Cambridge at the municipal level, and HKS should leverage the tools and information provided by external stakeholders.

Due to the location of the main HKS campus adjacent to the Charles River, the primary concern for climate change related threats is flooding. As HKS does not contain any on campus housing, the consensus of the Sustainability Committee is to continue to focus on quick-recovery strategies as opposed to preparing the campus to function during and immediately after an event. The recently drafted HKS Business Continuity plans should be reviewed to ensure that communications before and after events are carefully considered and address situations where not all IT and electrical infrastructure may be functioning properly. The Pavilions project has taken some important steps to support a quick recovery – most notably placing core electrical infrastructure at the first floor, not ground, level. Future building projects should continue incorporate this type of approach.

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¹⁷ Waste and diversion data is collected by Harvard Facilities Maintenance Operations as of 01.28.2015. This data represents only HKS owned properties, as data on spaces leased by the School is not currently available.
Key Recommendations

Strategic Recommendations
1. Continue to prioritize efficient and low emissions development of existing buildings on campus. Key opportunities include completing consolidation of the central chiller plant in the new Pavilions space, investing in energy data analysis, and developing renewables on campus.
2. Develop an HKS-specific inventory of products on campus that contribute to known negative health outcomes, and implement a plan to eliminate the worst of these chemicals from campus over the next five years.
3. HKS should develop, review, and revise its disaster mitigation and business continuity plans to reflect a ‘quick recovery’ strategy that aligns and builds upon forthcoming guidance from University and municipal resilience resources.

Tactical Recommendations
1. Continually re-assess opportunities for including renewable energy generation on HKS campus, and commit to fully funding the planned installation of solar photovoltaics as part of the Pavilions project.
2. Ensure furniture provided as part of the Pavilions and future renovations do not contain chemical flame retardants, which are known carcinogens.
3. Work with University stakeholders to develop and implement a plan for ongoing measurement of Scope III emissions related to procurement and develop a baseline for these emissions to determine the impact relative to travel and building consumption.
4. Incorporate University-wide climate preparedness and campus resilience recommendations into planning and construction as they are announced. University standards will be available by the end of 2015. Once released, review the HKS Business Continuity plan for alignment with these standards and to ensure operations can rebound quickly from a flood event.
5. Invest in energy data analysis tools including controls, retro-commissioning, benchmarking and renewed energy audits.
6. Finalize implementation of identified energy conservation measures from the 2009 energy audit that focused on the four primary HKS campus buildings: Belfer, Littauer, Rubenstein and Taubman.
7. Partner with strategic procurement to utilize preferred vendors who are in compliance with University-wide Standards for environmentally preferred products.
8. Renew contracts with vendors who comply with the University Green Cleaning Standards.

Quick Wins
1. Establish a 2014 baseline for electronics disposal volume and develop an action plan for reducing e-waste per capita in a manner that continues to maintain data security.
## Harvard Kennedy School Alignment with Harvard University Sustainability Plan

Current HKS Status with regard to University-wide goals, standards, and commitments

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<td>Re-assess viable energy conservation measures in existing buildings on campus.</td>
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<td>Expand and track electronic recycling, composting, and recycling programs on campus.</td>
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<td>Require vendors provide CSR reports that demonstrate sustainability efforts.</td>
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<td>Implement University-wide Climate Preparedness Standards for new construction and key infrastructure by 2016.</td>
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<td>Continue to track Scope III greenhouse gas emissions beyond travel and commuting.</td>
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<td>Implement the University-wide Sustainable IT Standards.</td>
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<td>Implement the University-wide environmentally preferred products standards by 2018.</td>
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<td>Implement all NPV+ energy conservation measures in the existing buildings on campus.</td>
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<td>Support University-wide water reduction of 30% by 2020.</td>
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<td>Support development and implementation of University-wide Climate Preparedness and Campus Resilience Plan by 2020.</td>
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<td>Reduce municipal waste 50% per capita over a 2006 baseline.</td>
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<td>Reduce electronic waste per capita by 2020.</td>
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<td>Require vendors to meet applicable University-wide goals and standards by 2020.</td>
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<td>Support University-wide GHG Reduction goals in 2016 and beyond.</td>
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<td>Maintain University-wide compliance with Harvard Green Building Standards.</td>
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<td>Identify and track high-risk chemicals in targeted building materials used on campus.</td>
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<td>Continue to implement the Harvard Green Cleaning Standards.</td>
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- ✔️ Done
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- ☐ To do
2.4 NATURE AND ECOSYSTEMS

**Key Finding**
The largest threat to the long-term degradation of our natural capital is climate change driven by man-made greenhouse gas emissions; however, there are other important areas where the management of this capital can affect well-being. One key issue is how to provide access to nature to the entire HKS community. HKS has an opportunity to lead in the development of a formal plan for providing access to nature campus-wide, both indoors and outside, by building on emerging research that “identifies strong relationships between nature and mental health...and unequivocally indicates that various forms of nature experience result in positive physiological health responses.”

**Strategic Recommendation**

1. Develop and implement a natural capital plan that supports well-being by reducing climate degradation through reduced greenhouse gas emissions and enhancing health through a comprehensive vegetation strategy. This plan should focus on supporting biodiversity through landscaping renewal in the Pavilions project, campus-wide microhabitat design, and providing access to vegetation indoors.

**HKS Strategic Profile**

It has long been established that humans can damage nature, but what is less well understood is what humans lose from reduced access to nature in and of itself. A large and growing body of research provides evidence for the vast array of benefits derived from human interactions with nature. This section examines how HKS is connected with the biotic environment, defined as all of the living things within an ecosystem, and provides an overview of the benefits of these interactions. It clarifies the School’s role in contributing to biodiversity while examining strategies to improve stakeholder access to natural environments. The construction of the Pavilions project provides both a challenge, the

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temporary removal of nearly all on-campus exterior vegetation during construction, and an opportunity, the ability to re-examine how the new courtyard, facilities, and Winter Garden will contribute to our Nature and Ecosystem goals.

While related to this topic in concept, food and agricultural implications are discussed in the Health and Wellness section of this report, and building and emissions implications are discussed in the Infrastructure and Products and Connecting sections.

Nature, Health and Wellness
Similar to most institutions at Harvard, HKS has no comprehensive, campus-wide plan for ensuring HKS students, faculty, and staff have interactions with natural environments that enhance their well-being on a day to day basis. Designs for the Pavilions in part seek to provide access to views of the outdoors where possible and will revitalize exterior landscaping. The new Winter Garden will also provide access to interior foliage year-round, but it’s unclear at this time what percentage of all HKS stakeholders have, or will have after Pavilions is completed, regular engagement with natural environments. Initial research into HKS practices indicates that interior landscaping is not managed centrally and does not reflect a campus wide set of goals. Indeed, at least six separate vendor contracts operating within the existing campus provide interior planting services and maintenance with little coordination or common objectives.

Given that research dating back to the 1960’s highlights pervasive benefits for people who have access to nature, there is a significant opportunity for HKS to improve the overall well-being of its constituents for costs that are low compared to the benefits they provide. These efforts have the added benefit of providing research and learning opportunities to measure the effects of biotic environment interventions on well-being. Research suggests that the role of pets in the workplace should also be considered due to the positive physiological and emotional benefits those may provide to some individuals. Such a policy would have to be carefully formulated, however, given the impact of workplace pets on those with allergies or other aversions to certain types of animals.

Synergies exist between providing active environments—walking tracks, bottle refill stations, and exterior seating—and fostering access to nature. Consider combining recommendations highlighted in the Health and Wellness section of this report that focus on enabling exercise outdoors with ways that the local environment, especially access to JFK Park and neighboring Charles River, could enhance the interaction of HKS community with natural features.

Biodiversity
The accelerating global decline in biodiversity is alarming, and the negative impacts are pervasive.\textsuperscript{19} Despite the small size of HKS campus overall, urban habitats are critical for maintaining the biodiversity of the larger population. The campus should still be reexamined for opportunities to increase

microhabitats for wildlife, targeting key animals and plants that are integral to natural ecosystems but struggle to adapt to urban environments such as pollinators, birds of prey, and native plant species that have declined in number as Cambridge and New England as a whole have developed into dense urban environments.

Formal natural capital programs are not yet typical in organizations such as HKS. Harvard University offers numerous programs which support access to nature and biodiversity goals including: beekeeping associations, common spaces programming, outing clubs, nesting platforms, and experiences at the Harvard Forest and Arnold Arboretum. HKS should integrate, leverage, and promote University-wide programs such as these to its community, and consider whether there are gaps in programs that could be filled locally at HKS.

**Key Recommendations**

**Strategic Recommendation**

1. Develop and implement a natural capital plan that supports well-being by reducing climate degradation through reduced greenhouse gas emissions and enhancing health through a comprehensive vegetation strategy. This plan should focus on supporting biodiversity through landscaping renewal in the Pavilions project, campus-wide microhabitat design, and providing access to vegetation indoors.

**Tactical Recommendations**

1. Survey the HKS campus for opportunities to enhance biodiversity of exterior landscapes and enhance microhabitat creation.
2. Ensure planned enhancements to facilitate stormwater re-infiltration and filtration on-site are properly maintained and operated once installed as part of the Pavilions process.
3. Prioritize construction of features that enhance opportunities to engage with the outdoor environment as the Pavilions project is completed:
   - Water fill stations
   - Benches
   - Shade structures
4. Renew contracts with vendors who implement organic practices, in order to continue to meet the 75% organic landscaping goal by 2020 as defined by the Harvard Sustainable Landscaping Standards.
5. Review the selection of plant species on-campus to favor the addition of those that are likely to be robust to future environmental change or help mitigate those effects when renewing campus landscapes.
6. Integrate with University-wide nature and ecosystem efforts by promoting events and programs that increase access to nature or biodiversity, such as bringing the Common Spaces program to the new HKS courtyard.
Quick Wins
1. Promote activities that occur in nature for HKS Day of Service (e.g. cleaning parks).
2. Provide HKS communications support for University-wide nature and outdoors oriented organizations such as the Arnold Arboretum, Common Spaces, and others.

Harvard Kennedy School Alignment with Harvard University Sustainability Plan
Current HKS Status with regard to University-wide goals, standards, and commitments

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- Design landscapes that are robust to climate change, ensure biodiversity, provide green spaces, and support stormwater filtration.
- Continue to maintain landscape with organic practices.
- Continue to comply with the Harvard Sustainable Landscaping Standards.

☑ Done
○ In progress
☐ To do
2.5 GOVERNANCE AND CULTURE

Key Finding
Acting on the recommendations in this sustainability plan will require a major cultural shift at HKS. A formal commitment to advancing sustainability efforts does not yet exist and Green Teams cannot do more without strong support from senior leaders, official funding, and additional staffing.

Strategic Recommendation
Establish a formal commitment led by senior leadership to advance sustainability at HKS that includes funding, staffing, and a management commitment to allow people to incorporate sustainability into their daily tasks.

HKS Strategic Profile
HKS has an active sustainability community composed of a consistent volunteer-led green team, environmental student groups, a knowledgeable facilities department, and some very engaged faculty and senior leadership. However, this strong foundation created by volunteers is at risk of degrading without the support of a more formalized sustainability framework and additional resources. Interdepartmental and on-campus efforts in sustainability are not always well coordinated resulting in fragmented sustainability efforts, limited involvement in community engagement, and general confusion of sustainability goals and how to get involved. The formation of the HKS Sustainability Committee, charged with creating this plan, was a first step in formalizing the campus sustainability efforts. The opportunity exists to build on the community’s enthusiasm and the release of the Committee’s recommendations by establishing a formal governance structure with strong senior leadership endorsement and a funded position to manage and execute sustainability goals.

Governance
Members of the HKS community have helped inform the University-wide sustainability governance structure. In fact, HKS has a number of affiliations with University-wide sustainability efforts including: faculty appointments at the Harvard University Center for the Environment (HUCE), faculty representation on the Complementary Mechanisms Advisory Group and the Greenhouse Gas Emissions
Reduction Goal Review Task Force, staff representation on the Sustainability Energy Management Council (SEMC), Green Team Leaders Network, the University Construction Management Council (UCMC), and student led environmental groups such as the Council of Student Sustainability Leaders (CSSL). However, the sustainability governance structure at HKS is limited and there is a strong consensus in the Sustainability Committee that the strategic needs of an HKS sustainable development program far exceed what volunteer capacity, fueled by personal enthusiasm, can create.

HKS can strengthen its sustainability commitment by establishing a formal governance structure that can effectively connect the decentralized efforts and provide cohesion in sustainability programming at HKS. It is recommended that this governance structure incorporate three types of participants: senior leadership/decision makers, topic area experts, and on the ground implementers. Appendix A.3 illustrates one example of how the governance groups could be structured, but there are many structures that can be successful as long as the right participants are engaged. It is also important to have one person who manages the overarching governance structure and can ensure it is functioning properly, liaise with the community, and make sure the goals of the sustainability plan are advanced.

**Culture**

HKS culture is founded on the centralizing principle of John F. Kennedy’s call to action “ask what you can do.” This principle unifies students, faculty, and staff and considering this theme in the context of sustainability creates an opportunity to establish a strong sustainability culture in an otherwise decentralized School. The HKS Sustainability Committee identified eight major themes of engagement important to cultivating a culture of sustainability on campus: demonstrated senior leadership commitment, mapping of sustainability goals to HKS mission, increased education of on-campus initiatives, clarity and consistency of communications and branding, continuity of programming, coordinating and integrating across decentralized groups, maintaining enthusiasm and motivation for programs, and a focus on service to others. The recommendations throughout this plan were informed by these eight themes and together represent the building blocks of a strong sustainability culture at HKS.

Acknowledging potential barriers to engagement at HKS is important to structuring engagement activities in a way that optimizes success. The Sustainability Committee noted six barriers including: the commuter culture, the decentralized nature of daily operations, student turnover, busy faculty members and staff, conflicting schedules of community members, and the lack of a “point-person” for sustainability on campus. Below are recommendations and strategies for overcoming these barriers.

**Key Recommendations**

**Strategic Recommendation**

1. Establish a formal commitment led by senior leadership to advance sustainability at HKS that includes funding, staffing, and a management commitment to allow people to incorporate sustainability into their daily tasks.
**Tactical Recommendations**

1. Develop an HKS Sustainability Fund that provides financing for campus sustainability projects that could result in long-term savings and/or improve the well-being of the HKS community; establish a fundraising goal and a specific action plan to achieve it.
2. Maintain support of senior leadership to guide execution and refinement of long-term HKS Sustainability Plan.
3. Increase sustainability visibility on campus through existing forums (e.g. orientation, presentations/events, and highlight faculty research on sustainability).
4. Develop an alumni engagement strategy to cultivate relationships with formal alums in the sustainability field.

**Quick Wins**

1. Host a fall “kick off” event – introduce HKS Sustainability Plan and Recommendations (connect timing to global academic and government discussions on UN release of new Sustainable Development Goals).
2. Create opportunities for students to contribute to sustainability goals outlined in this plan through PAEs, SYPAs and other academic opportunities at HKS.
## Harvard Kennedy School Alignment with Harvard University Sustainability Plan

Current HKS Status with regard to University-wide goals, standards, and commitments

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### GOVERNANCE AND CULTURE

- ✅ Develop strategy for engaging and informing HKS alumni on sustainability.
- ❑ Increase participation in Healthy Harvard programs
- ❑ Increase staff participation in the Green Office Program by 30% over a 2014 baseline
- ❑ Utilize campus as a Living Lab for student to pilot solutions to sustainability challenges.
- ❑ Facilitate strong governance structures to ensure integration of sustainability into business practices at all levels of the School.
- ❑ Senior Leaders annually communicate to students, faculty, and staff about HKS’s commitment to sustainability.
- ❑ Annually recognize & reward sustainability accomplishments.
- ❑ Maintain and continuously improve programs that drive sustainability action among HKS stakeholders.

- ✅ Done
- ⬜ In progress
- ❑ To do
3.0 Measurement

As sustainable development efforts are implemented now and into the future, the immediate well-being of HKS and surrounding communities will increase. The overall base of assets that constitute our foundations for improving inclusive well-being elsewhere and in the future will also grow. In order to better understand how successful HKS is in meeting these goals, a framework for measuring both well-being and the asset base must be developed. There is currently a gap between what HKS would like to measure and the measurement tools broadly available. This report does not propose specific metrics for adoption, but this topic provides an opportunity to utilize faculty research to further understand the progress HKS is making in its sustainable development efforts.

The following sections provide one potential path to developing meaningful metrics for immediate and long term well-being in the HKS community and the communities we influence. Additional illustrative examples of potential metrics are provided in Appendix A.3, though it is not the intent of the Committee that these metrics be adopted without further discussion and refinement.

Financial Valuation

We believe that HKS has both the opportunity and the obligation to devote its expertise to developing a framework that it and other organizations can use in evaluating the implications of alternative decisions for sustainable development. A disconnect exists between the way the world in general, and HKS specifically, values the implications of their investments and purchases on inclusive social well-being now and across time. Current purchasing decisions at HKS do not accurately factor non-market costs and benefits associated with carbon emissions and other factors that potentially harm well-being outcomes or diminish the asset base required to sustain it.

Specifically, HKS should develop a metric that enables accurate pricing of the impact of carbon emissions and include these costs by applying shadow pricing as part of all financial decision making processes where emissions are a potential outcome. This is not the only thing that should be factored in the long term plans for HKS to value, however it is a first step. In practice, development of accurate carbon pricing requires many compromises and approximations. HKS should look at what our scholars’ research has determined is an appropriate way of looking at the damages of carbon emissions and use these estimates in decision-making for energy use as soon as possible, and refine the figures over time as new research emerges.

Well-Being Assessments

The Stiglitz-Sen-Fitoussi report suggests that immediate well-being, and the sustainability of that well-being, are complementary to each other and should be evaluated in tandem, but that measurement should be separate so the two are not conflated. Tools need to be developed to measure the well-being of the HKS community today, but the goal of such measurements is to provide a baseline for forecasting the impact changes in policy and practice will have on future well-being and the base of assets upon which HKS relies to function every day.
HKS should develop a survey or other tool that captures the “State of Current Well-being” of HKS faculty, staff, and students, and regularly assess the results. The first survey should be piloted in the 2015-16 academic year (AY16) to provide a baseline by which future results will be compared. By better understanding current well-being, and in particular the value that the HKS community places on different components of well-being, future efforts to develop forecasting and predictive tools will have a basis for comparison.

Asset Base
As discussed in the Overview, the asset base represents all of the capital stocks that must be managed to ensure that well-being among HKS stakeholders is being achieved now in ways that do not undermine the potential for achieving well-being of others elsewhere and in the future. It will likely be impossible to perfectly account for the aggregate capital stock of HKS. Proxies will be necessary to estimate their state, just as they are for contemporary national accounts of inclusive wealth being generated by the World Bank and UN.

Measurement of some of our assets are already underway, as is the case with the Scope I and Scope II emissions accounting at HKS and the University as a whole, yet a more comprehensive understanding of our assets is needed. This report recommends starting to develop metrics as soon as possible, despite inherent imperfections, and evolve these analysis tools over time.
A.1 SUSTAINABILITY COMMITTEE

With support from Co-Chairs Janney Wilson and Bill Clark, the following team was developed in order to provide broad input and representation across major HKS stakeholder groups.

<table>
<thead>
<tr>
<th>Affiliation</th>
<th>Department</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harvard Kennedy School</td>
<td>Chief Financial Officer</td>
<td>Janney Wilson, Co-Chair</td>
</tr>
<tr>
<td></td>
<td>Faculty</td>
<td>Bill Clark, Co-Chair</td>
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<td></td>
<td></td>
<td>Henry Lee</td>
</tr>
<tr>
<td></td>
<td>Students</td>
<td>Jessica Newman</td>
</tr>
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<td></td>
<td></td>
<td>Nancy Hann</td>
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<tr>
<td></td>
<td>Office of Facilities Management</td>
<td>Laura Caputo</td>
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<td>Arthi Kasetty</td>
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<td>Mark Nystrom</td>
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<td></td>
<td>Executive Education</td>
<td>Sharon Johnson</td>
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<td></td>
<td>Center for Public Leadership</td>
<td>Sharon Watson Fluker</td>
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<td></td>
<td>Belfer Center</td>
<td>Karin Vander Schaaf</td>
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<tr>
<td></td>
<td>Alumni Relations and Resource Development</td>
<td>Calee Lucht</td>
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<td></td>
<td>Communications</td>
<td>Robert O’Neill</td>
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<td></td>
<td>Office of Financial Services</td>
<td>Emily Poore</td>
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<tr>
<td>Harvard Campus Services</td>
<td>Office for Sustainability</td>
<td>Heather Henriksen</td>
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<tr>
<td></td>
<td></td>
<td>Elaine Strunk</td>
</tr>
<tr>
<td></td>
<td>Green Building Services</td>
<td>Joel McKellar</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Katie Champagne</td>
</tr>
</tbody>
</table>

Timeline
The Committee met monthly from December 2014 – June 2015. The strategy development effort is fully funded by HKS and work is being supported by the Office for Sustainability and Green Building Services.
A.2 Additional Opportunities

Health and Wellness

Strategies for creating a management culture that supports personal wellness
- Fast track manager participation in the Universal Managers Training (required for all managers by 2020), which covers well-being, sustainability, and work/life balance.
- Provide guidelines on acceptable uses of work time towards sustainability and wellness.

Strategies for information dissemination and employee/student stress management
- Encourage employees to take accrued vacation.
- Subsidize gym memberships.
- Establish a wellness space on campus for meditation, yoga, or one-minute clinic.
- Assess opportunities to increase new mother/parent support.
- Create a resource for managers/faculty to help them identify signs of stress or depression in their team and list of next steps or actions to take.
- Host a “coffee connection” focused on sharing the available well-being resources with the community. (e.g. Healthy Harvard, Harvard Gym Discount, Wellness Center, Employee Assistance Program (EAP), Meditation call-in line (free), etc.)
- Utilize Faculty Assistant meetings to share wellness offerings at Harvard.

Strategies for encouraging healthy behaviors
- Educate the community on existing health and wellness offerings that they can begin taking advantage of immediately.
- Continue to implement a tobacco-free campus policy.
- Renew contracts with dining services providers that prioritize healthy and sustainable foods.
- Run a healthy food campaign with lessons on how to prepare healthy foods and signage in the café directing students to healthier choices.
  - Partner with Harvard Chan School of Public Health faculty to provide education campaigns around preparing healthier meals.
- Run a “Take the Stairs” campaign to encourage using the stairs over the elevator.
- Establish an HKS walks/runs group at lunch or gather community members to run a 5K together.
- Run a campus-wide pedometer/step-tracking competition.

Connecting
- Work with University stakeholders to develop a standard for tracking all transportation emissions.
- Utilize vendors who prioritize clean fleets for their service vehicles.
Strategies for travel
- Utilize students to research actual travel and videoconferencing practices used on campus and present findings.
- Host a campaign to increase awareness of greenhouse gas emissions affiliated with different types of travel. See Union of Concerned Scientists report entitled *Getting There Greener* for detailed guidance on personal travel modes.
- Adopt the Business Travel feature to support healthy travel practices as defined in the WELL Building Standard v1.0:
  - Provide options to select non red-eye flights or additional leave following travel if no options are available.
  - Allow alternatives for business trips in which the total travel time exceeds both five hours and 25% of the total trip duration.
  - Reimburse for any gym usage during travel.
- Outfit campus with flexible, state of the art telecommuting capabilities.
- Create fun and interesting campaigns to encourage and familiarize people with telecommunications technology that can replace travel.
  - Develop a training program for the use of telepresence equipment resources.

Strategies for commuting
- Increase visibility of alternative commuting choices for staff and faculty offered through the Harvard CommuterChoice Program.
  - Continue to fund a Hubway station on HKS campus.
  - Provide showers for long-distance bike commuters.
  - Identify opportunities to provide additional bike parking at 124 Mt. Auburn Street.
- Advocate for bike safety in and around HKS campus and increase integration of bicycle friendly features including but not limited to bike paths, lanes, and covered parking.
- Regularly leverage CommuterChoice bike education classes on HKS campus and host bike tune-up.

Infrastructure and Products

Strategies for healthy environments
- Renew contracts with vendors who comply with the University Green Cleaning Standards.
- Consider alignment with WELL Building standards when prioritizing construction activities.

Strategies for building emissions reduction
- Share “best practice guide for managing and operating buildings at Harvard” with all operations staff, expected to be available in Summer 2015.
  - Include best practice guide in all onboarding documents for new hires within the operations department.
Strategies for procurement and waste reduction

- Implement University-wide standards for environmentally preferred products, released in June 2018.
- Identify on-campus waste reduction opportunities by conducting building waste audits and reviewing purchases for efficiencies in procurement (e.g. paper reduction through two-sided printing, combining orders to reduce packaging, sharing resources across departments to reduce surplus, etc.).
- Establish a way to connect disparate purchasing groups at HKS in an effort to improve procurement tracking and information dissemination at HKS.
- Appoint a dedicated representative to the Harvard Procurement Advisory Group.
- Invest in recycling bin infrastructure to allow one recycling bin for every trash bin throughout the campus.
- Implement the University-wide Green IT Standards.
- Consider expanding the two-year phone upgrade policy to three-years.
- Continue to lease computers.
- Purchase paper with a minimum of 30% post-consumer recycled content.
- Recycle all electronic/digital hardware, devices, and consumables in a secure and sustainable manner.
- Run an e-waste drive competition to encourage offices to turn in their e-waste for responsible recycling and to raise awareness about the social justice issues and environmental damage caused by e-waste.

Nature and Ecosystems

Strategies for the exterior environment

- Continue to contract with a landscape vendor that implements organic practices, in order to continue to meet the 75% organic landscaping goal by 2020 as defined by the Harvard Sustainable Landscaping Standards.
- Design landscapes and choose plant species that are likely to be robust to future environmental change or help mitigate those effects (e.g. Identify trees resilient in warmer climates, trees that sequester more carbon, etc.).
- Utilize the built environment to maximize biodiversity of exterior landscapes and enhance habitat creation.
  - Plant fruiting shrubs for birds nesting and migration support services
  - Consider the development of pollinator habitats.
- Maintain the exterior landscape and the built environment to support stormwater re-infiltration and passive stormwater filtration.
- Consider utilizing the WELL Building Standard as a reference to inform future activities following construction of the Pavilions project:
  - Exterior Active Design – Requirements for benches, movable chairs/tables, water refill stations, visual amenities (water feature, plaza, garden, art)
External Exercise spaces – Requirements for parks with playgrounds, workout stations, trails, or accessible bodies of water within 0.5 miles.

Biophilia II – Quantitative - At least 25% of the site features landscaped grounds or accessible rooftop gardens with a minimum tree canopy of at least 70% of the landscaped area

- Create an art gallery/picture wall with photos of indigenous plants/natural assets from the native lands of students, faculty and staff.
- Establish opportunities to volunteer with local sustainability-focused non-profits (e.g. Charles River Cleanup, etc.)

Strategies for the interior environment

- Consider increasing the number of indoor plants and/or installing indoor water features or green walls.
- Consider (or give priority) to natural materials in remodeled designs including color, natural shapes, etc.
- Plant vegetation that stays verdant all year long, e.g. bamboo, evergreens, etc.
- Create an art gallery/picture wall with photos of indigenous plants from areas around the world where students, faculty and staff come from.
- Consider utilizing the WELL Building Standard as a reference to inform future activities following construction of the Pavilions project:
  - Biophilia I – Qualitative – A “biophilia plan” is developed that includes a description of how the project incorporates environmental elements, lighting, nature’s patterns throughout the design, and must account for natural interactions both adjacent to and within the building.
  - Biophilia II – Quantitative - Indoors, potted plants or planted beds cover at least 1% of the floor area, and a plant wall per floor that is at least 2% of the floor area

Governance and Culture

Strategies for campus-wide engagement

- Tailor campus initiatives/campaigns around the central theme “Ask what you can do to advance sustainability”.
- Integrate Sustainability into business practices at all levels of the campus by utilizing network of department/office managers.
- Strive to attain at least Green Office Leaf 2 certification for all HKS offices.
- Expand HKS' impact by encouraging sustainable behaviors at home as well as at HKS – share sustainability cheat sheet for employees to use in offices and at home.
- Create opportunities for volunteer trips relating to sustainability – could be tied to coursework
- Utilize behavioral research student groups to inform engagement outreach.
- Create “Green Games” where schools can compete against each other, consider competition with schools beyond Harvard.
• Offer a mindfulness program for HKS staff through the Center for Wellness. This program was established by Executive VP Katie Lapp and has been piloted extensively within Central Administration over the last few years. They have seen great participation rates.

Strategies for messaging on sustainability and wellness
• Increase frequency of messaging and ensure it is consistent year over year.
  o Provide at a minimum, annual sustainability messaging from the Dean.
• Incorporate sustainability communications into existing efforts.
  o Dean’s Coffee
  o New Hire Orientations
  o Student Orientations
  o Reunions
  o Graduation ceremonies
  o Service Week
  o Center for Public Leadership events
  o Form Speaker schedule
• Reward and recognize students and staff for their efforts in sustainability.
  o Harvard Heroes
  o Green Carpets Awards
  o Dean’s Award
• Offer work/school-sponsored volunteer opportunities that relate to sustainability in the broader Cambridge/Boston community.

Strategies for student engagement
• Propose a Policy Analysis Exercise focusing on well-being and sustainability
• Increase sustainability related curriculum/fellowships/coursework
• Facilitate connections to Cambridge and Global Sustainability Leaders
A.3 ILLUSTRATIVE EXAMPLES

Governance and Culture

Potential Governance Structure:

**Executive Steering Committee**
- **Committee Goal:** Make strategic recommendations to the Dean to prioritize and fund HKS Sustainability Plan efforts and drive the sustainability agenda forward on HKS campus.
- **Suggested Membership:** Finance Dean/CFO, Faculty, Dean of Students, Student Government Representative; % FTE Sustainability Manager.
- **Meeting Schedule:** Meets 3-4 times a year, twice with the Advisory Committee and at least once to discuss decisions and strategy for moving sustainability initiatives forward.

**Sustainability Advisory Committee**
- **Committee Goal:** Advises Sustainability Leadership Committee on progress of sustainability plan across departments, identifies solutions to potential barriers of implementation, and brainstorms engagement campaigns and future annual goals/priorities.
- **Suggested Membership:** %FTE Sustainability Manager (Lead), Facilities Director, IT Director, Human Resources Director, Procurement Director (or closest position to this), Communications Director, Alumni Engagement Director, Executive Education Director, Department of Student Affairs Director, Green Team Leader(s), Student Representation (mid-career + MPP).
- **Meeting Schedule:** Meets quarterly (twice with Leadership Committee to report out on state of HKS sustainability efforts).

**HKS Sustainability Teams**
- **Committee Goal:** Engage HKS community in sustainability efforts, informed by HKS Sustainability Plan as well as actions proposed by the Sustainability Leadership Committee.
- **Suggested Membership:** Led by Sustainability Team Co-Chairs, Communications, HR, Alumni Affairs, Facilities, and generally interested members of the community (staff or student). % FTE Sustainability Manager provides strategic support, but does not lead this effort.
- **Meeting Schedule:** Meets 9 times per year.

**Measurement**
A series of charts are provided below that shows potential metrics that members of the Committee felt might be useful in evaluating progress in enhancing contemporary well-being and asset base of the HKS community. We emphasize that these are presented as elements of a *possible* measurement system that various members of the Committee felt might be worth considering, rather than the coherent
framework for monitoring progress toward its sustainable development goals that we hope HKS will develop.

Key
\[ \begin{align*}
N_c &= \text{Natural Capital} \\
H_c &= \text{Human Capital} \\
M_c &= \text{Manufactured Capital} \\
K_c &= \text{Knowledge Capital} \\
S_c &= \text{Social Capital}
\end{align*} \]

### Health and Wellness

| Metric                                      | Asset Base | \[ \begin{array}{cccc}
N_c & H_c & M_c & S_c \\
\end{array} \] |
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Annual sick/vacation days used per capita</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>People participating in Healthy Harvard</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Ratio of organic/non-organic food sold in dining hall</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Annual insurance claims/premium costs per capita</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Faculty/staff turnover</td>
<td>X X X X</td>
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### Connecting

| Metric                                                  | Asset Base | \[ \begin{array}{cccc}
N_c & H_c & M_c & S_c \\
\end{array} \] |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Airline miles traveled / total travel emissions</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Travel emissions and associated offsets purchased</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Hours of usage of teleconferencing facilities</td>
<td>X X</td>
<td></td>
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</tbody>
</table>

### Infrastructure and Products

| Metric                                                                 | Asset Base | \[ \begin{array}{cccc}
N_c & H_c & M_c & S_c \\
\end{array} \] |
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total usable area of built space for HKS mission (e.g. classroom)</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Total building-related emissions</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Embodied energy/emissions of purchased products</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Water/air quality testing for interior spaces</td>
<td>X X X X</td>
<td></td>
</tr>
<tr>
<td>% of building with access to natural light</td>
<td>X X</td>
<td></td>
</tr>
<tr>
<td>Total volume of toxic/harmful chemicals purchased</td>
<td>X X</td>
<td></td>
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</tbody>
</table>

### Nature and Ecosystems

| Metric                                           | Asset Base | \[ \begin{array}{cccc}
N_c & H_c & M_c & S_c \\
\end{array} \] |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Annual species on campus survey</td>
<td>X X</td>
<td></td>
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<tr>
<td>% staff and faculty w/ access to Views/Nature</td>
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<td></td>
</tr>
<tr>
<td>Metric</td>
<td>Asset Base</td>
<td></td>
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<tr>
<td>------------------------------------------------------------------------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nc</td>
<td>Hc</td>
</tr>
<tr>
<td>Total area of interior vegetation</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td># of people in Harvard ‘outdoors’ clubs</td>
<td>X</td>
<td></td>
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<tr>
<td><strong>Governance and Culture</strong></td>
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<tr>
<td># of Living Lab opportunities</td>
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<tr>
<td># of people participating across programs</td>
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<td># of Sr. Leadership announcement of sustainability efforts</td>
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<td># of departments adopting sustainability practices</td>
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<td># of individuals and teams recognized for sustainability efforts</td>
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<td># of events or high profile speakers on sustainability</td>
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<td># of course offerings relating to sustainability</td>
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<tr>
<td># of alumni in the sustainability special interest group by graduation year</td>
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