

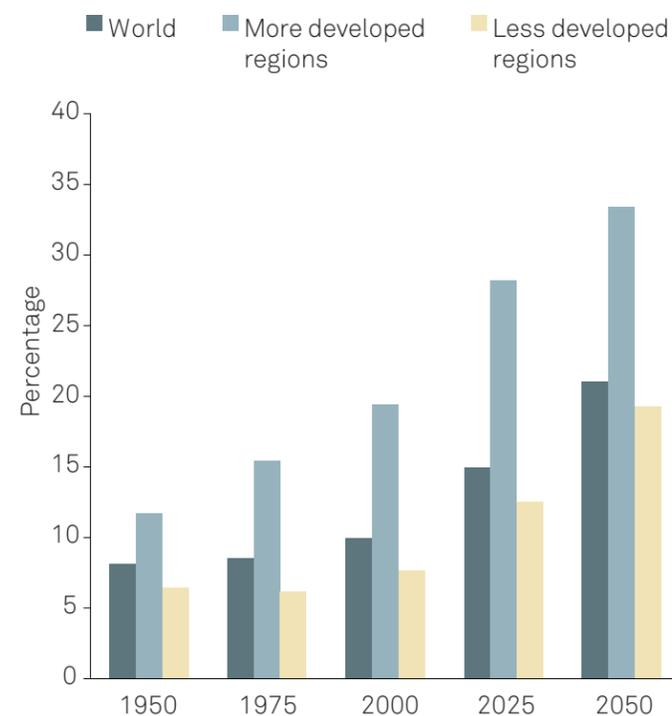
The Gray Migration

In the last century most of the changes in the world have been grounded in the evolution of technology. Now we are experiencing a change grounded in demography. Advancements in healthcare have resulted in longer life expectancies and cultural shifts have influenced people's decision to begin families later in life. Taken together these shifts and advancements have created a larger proportion of elderly in the population. We call this The Gray Migration.

The effects of this are significant. Current working-age populations support current pensioners. With fewer youth to support the elderly, there will be shortages of resources.

Proportion of population aged 60 or over: world and development regions, 1950-2050

UN World Population Aging Report



Although the effects will be most apparent in the developed world, this is not just a first world matter. Aging populations prevail or are developing in most countries around the world.

The Gray Migration will have a salient role in all of our future living patterns: commerce, public policy and services, housing and community development, and perhaps most significantly, healthcare and financial planning.

Our goal is to design the world we want to live and grow old in. This future holds opportunities to create new products and services that accommodate the specific needs of the senior population, as well as those who will care for them. Creating new jobs will be a vital part of the solution. As seniors live longer, they will increasingly remain in the workforce past the traditional retirement age. Seniors will demand positions that accommodate their capabilities and offer flexibility and choice in how they work. New industries that emerge to provide for the needs of an aging population must be scalable. We will need to do more with less. We envision creating systems composed of technologies that exist in embryonic form today. Our design solutions focus on creating systems of these technologies, combining them in effective services, and scaling them to meet global needs. We view the challenges as opportunities to improve life across society.

System Diagram

To properly understand a problem as complex and large scale as the Gray Migration we employed a systems level approach.

Process

Break Apart The Problem



Modes: Major subcategories of the topic



Activities:

What happens within each mode



Analysis And Grouping Of Activities



Functions:

What we want the system to do



Design Factors:

Considerations about functions



Solution Elements: Candidate solutions



Create A Matrix



Score The Matrix

RELATN And VTCN Software Analysis



Semi-Lattice Function Structure: Function sorting and solution element matching



Re-organize The Semi-Lattice



System Elements



Create Defining Statements:

Constraints, objectives, and directives



Refine Elements: What it does, how it works, what problem it addresses



Sort System Elements: Organize by scalability and ability to support business



Craft Stories To Explain Elements

used to



We identified four cornerstones to addressing the world that results from the Gray Migration.

Mobility

With its emphasis on private transportation, our existing transportation system is woefully unprepared to meet the needs of a growing elderly population. Ensuring that elderly have access to their community and the wider world necessitates re-evaluation of how everyone, not just the elderly move around their world.

Financial

Entitlement systems will struggle to support the influx of recipients, especially as the number of workers supporting them proportionally shrinks. An emphasis on improved financial planning and developing new job opportunities for seniors is needed for a financially solvent future.

Dwelling

Elderly individuals' living needs change dramatically as they undergo changes in mobility, caretaker access, family proximity and companionship. A re-evaluation of the current models of elderly living and aging in place will be necessary.

Social

Enabling the elderly to play an active role in their community is both a mental and physical benefit. Interactions between young and old generations will be catalyst for community interaction for both generations.

Precursors

We are not the first to look at this problem. Researchers at MIT AgeLabs, LeadingAge, the

Mayo Clinic as well as many other places are not sitting idly waiting for the tidal wave of demographic shift to overwhelm society. People around the world are proactively working on products and other solutions that will help us address any number of potential problems. What we hope to add is a systemic view of this problem space. Building off solutions, plans, and other work already in process, we want to project forward and design the framework for a future that is designed in a prescient way.

Narrative Structure

We recognize the differences in the aging population's mental, physical and financial needs. Therefore our proposed system elements are aimed to address the needs of a wide demographic of the population. Certain system elements may be best used by a particular segment of the population while others can be applicable to a wider range of seniors and to the greater population as a whole.

This wide ranging demographic is illustrated in four distinct stories that aim to describe our various system elements. Characters vary in age, capability and economic standing as a way to describe how the system elements are intended to address these varying needs. Each story describes a different time period beginning with the furthest out into the future and the most elderly character. In this future the large scale infrastructure system elements have been fully implemented for some time and are described through the character's interaction with them. Subsequent stories move closer to the present time and describe characters in different points in their lives with differing

needs. Each character uses a different set of system elements to help solve the problems they are faced with as they age. A more detailed explanation of each story's system elements is provided as a sidebar following each story. For a complete list of all system elements refer to the appendix at the end of the book.

System Element Chart

System elements are a grouping of solutions that are intended to both support a growing aging population and create new business and design opportunities for several industries and disciplines. This diagram shows how we ranked the system elements along those two axes.

