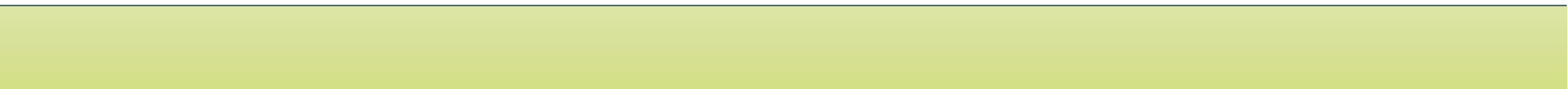


Climate Conversations

Creation Care and Innovations to mitigate Climate Change

St Mark's Creation Care Ministry

December 2025



Agenda

- **Land Acknowledgement:** Saint Mark's Cathedral acknowledges that we gather on the traditional land of the first people of Seattle, the Duwamish People, who are still here, and we honor with gratitude the land itself and the life of all the Coast Salish tribes.
- Opening Prayer
- Framework
- Discussion
- Actions
- Sharing and Q&A
- Closing Prayer

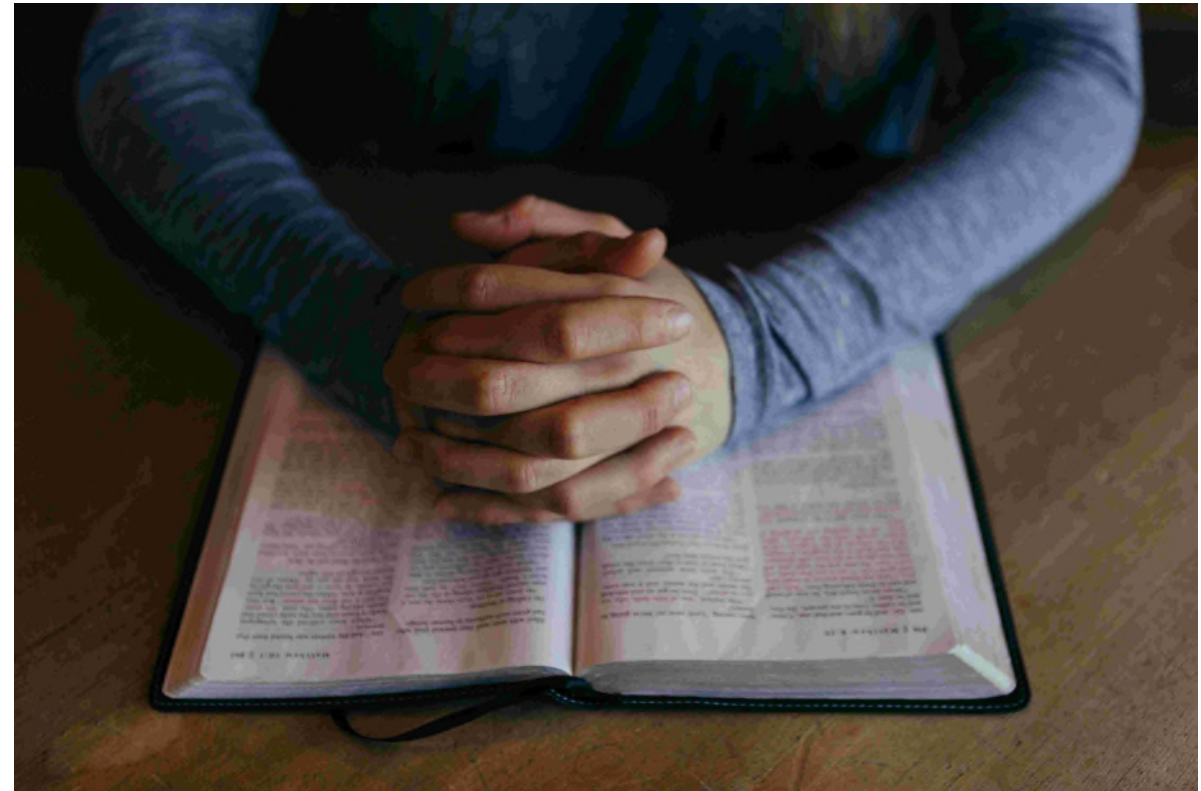
Innovations for Climate Change and Creation Care

Innovations to reduce or adapt to climate change, ranging from new devices or services to practices we can use every day, and more, are bubbling up all the time. Leveraging practical and useful innovations can help us to care for creation more effectively. We'll discuss the new ideas, innovations and practices that are occurring, how to learn about them without becoming overwhelmed, and opportunities to use them or put them into practice in our daily lives. We'll also discuss how to keep abreast of the changes.

Opening Prayer

Dear God, We pray for creativity in our lives. Help us to think outside the box and to find new and innovative solutions to problems. May our creativity bring joy and inspiration to ourselves and to others. Let us use our creative talents for good.

Thank you for the gift of creativity. Help us to nurture and develop it in all areas of our lives. Guide us to use our creativity to bring about positive change in the world, addressing challenges with fresh perspectives. Help us to find inspiration in your creation, drawing on the beauty and diversity of the world around us. Thank you for the joy and fulfillment that come from creative expression. Help us to embrace and celebrate our creativity every day. Amen



Climate Change Effects are Everywhere

- Climate change affects people around the world
 - Wildfires in the US and Canada
 - Floods in South & Southeast Asia
 - Hurricanes in the Caribbean
- 91% of Americans experienced extreme weather - unusually hot or cold days, poor air quality, hurricanes or floods*
- 72% of Americans are concerned about climate change*
- Climate change mitigation and adaptation are essential



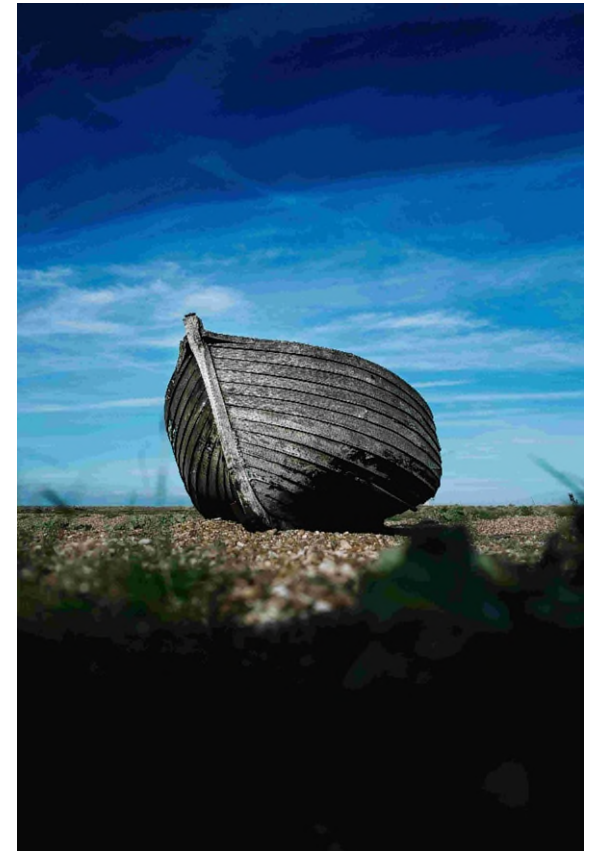
Innovation Brings Hope

- Entrepreneurs are creating solutions that mitigate climate change
- They use a multitude of tools to achieve their goal
 - Innovation
 - AI
 - Design thinking
 - Scientific knowledge
 - And more...
- While the wording may have changed to 'efficiency', the mission is the same
- The solutions can help care for creation



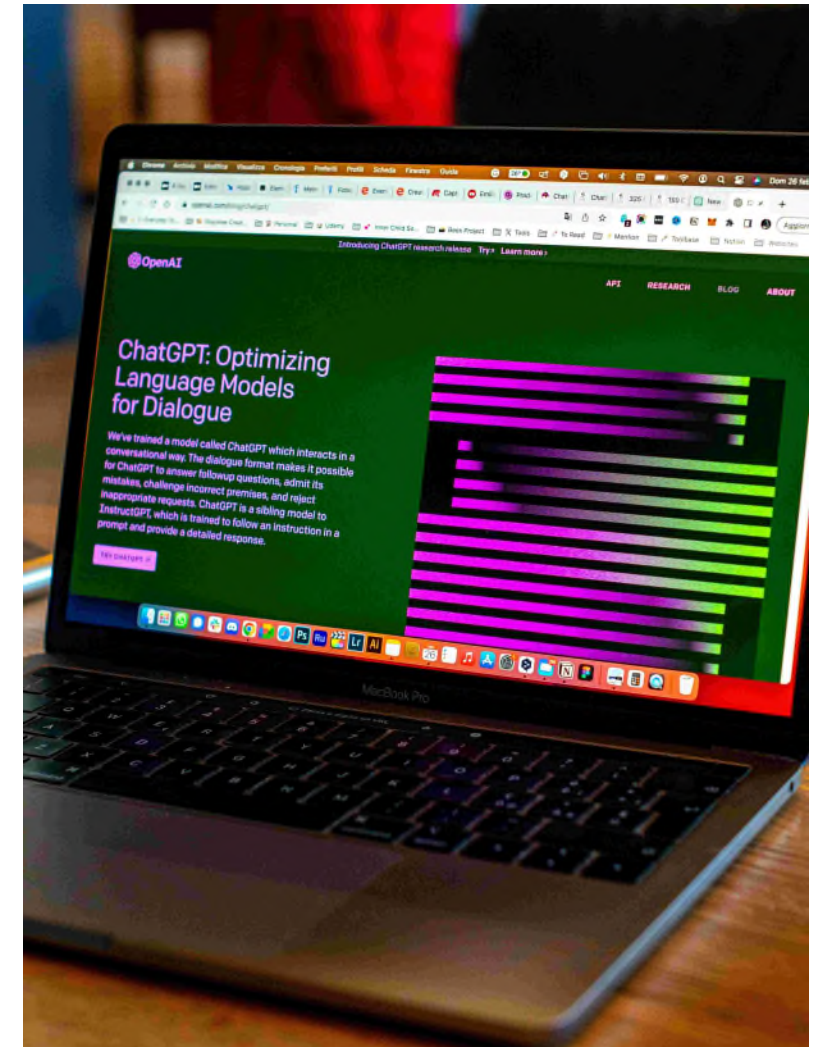
Innovators Abound in the Old Testament

- Genesis 6 (Noah): “Build yourself a ship from teakwood. Make rooms in it. Coat it with pitch inside and out. Make it 450 feet long, seventy-five feet wide, and forty-five feet high.
- Exodus 35: Then Moses said to the Israelites, “See, the LORD has chosen Bezalel son of Uri, the son of Hur, of the tribe of Judah, and he has filled him with the Spirit of God, with wisdom, with understanding, with knowledge and with all kinds of skills - to make artistic designs for work in gold, silver and bronze, to cut and set stones, to work in wood and to engage in all kinds of artistic crafts. And he has given both him and Oholiab son of Ahisamak, of the tribe of Dan, the ability to teach others.



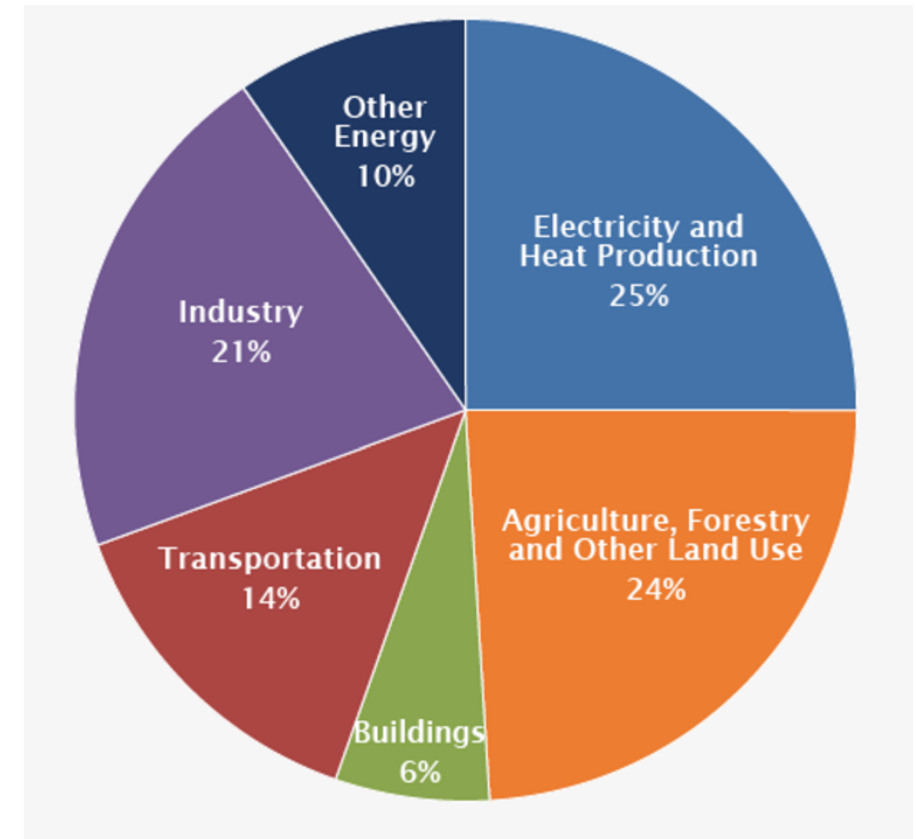
Innovations in an Era of AI

- AI has some negative implications
 - Power usage
 - Water usage
 - Rising electricity costs
- AI can be positive for climate change
 - Enables faster and better innovation
 - Improve recycling
 - Map deforestation and reforestation
 - Efficient routes for drivers and pilots
 - Smarter farming



Innovations are Relevant to You and Me

- Innovations
 - Reduce greenhouse gas emissions
 - Make our lives easier or better
 - Save money
 - Improve health
- Our focus is innovations we can use:
 - Energy
 - Agriculture & Food
 - Transportation
 - Buildings
- Individual actions make a difference



(Image courtesy of the US EPA)

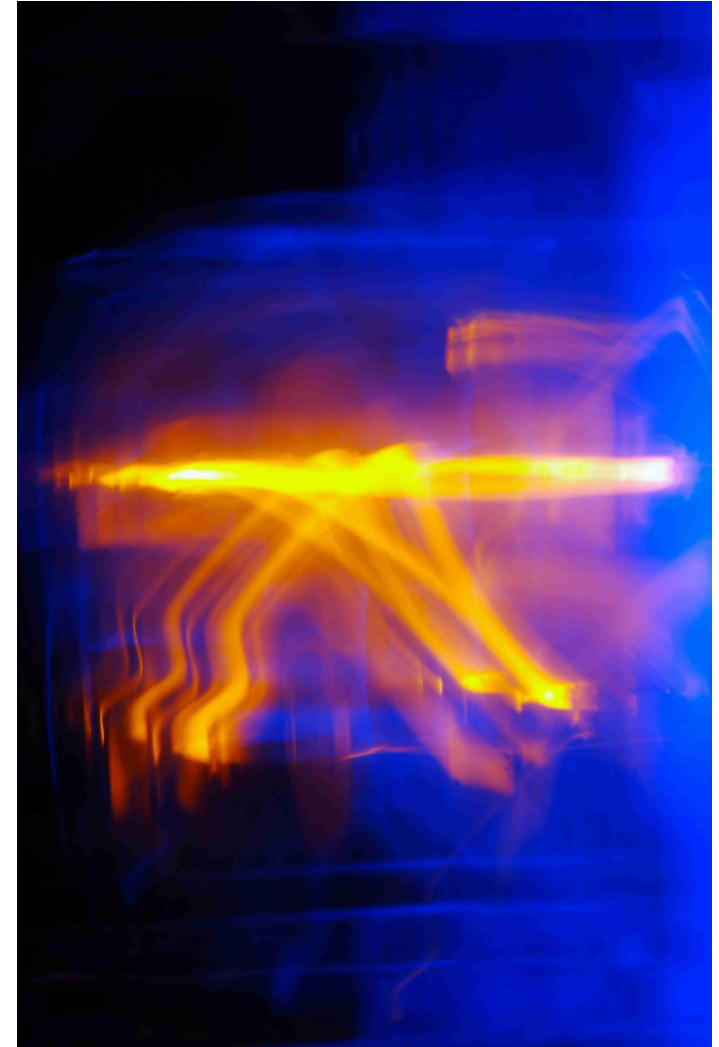
Innovations Can Reduce Energy Usage

- Solar energy
 - More efficient solar panels
 - Balcony solar is getting close
 - Financing is available
- Wind and geothermal
- Devices
 - Smart home monitors track usage by device and enable reductions
 - Smart electric plugs and thermostats
 - Home automation to turn devices on and off, and optimize usage
 - LED lights



More Innovations to Reduce Energy

- Appliances
 - More efficient refrigerators, dryers, washers, stoves and water heaters
- Home and building insulation
 - Thermal camera to identify heat loss
 - New materials for insulation
- More effective heat pumps
- Software to analyze and reduce building or factory energy usage



Energy Innovation We can Use

- Balcony Solar (Rowkin Energy)
- Agrivoltaics
- Portable batteries (Jackery, Enphase)
- Apps to reduce personal emissions (Klima/Wren)
- Solar powered personal lighting (mpowered, Biolite)
- Smart plugs (Kasa)
<https://www.nytimes.com/wirecutter/reviews/best-smart-switch/>
- Flint paper batteries



Industry: Collective Action for Influence

- Influences Industry or Government
- As You Sow
 - Shareholder power to create lasting change and align investments with values
- Third Act
- Environmental Voter Project
 - Behavioral science-informed messaging to turn low-propensity environmental voters into better voters



Discussion & Breakout Session

Questions:

- What are you most hopeful about in caring for creation?
- What is your view of or experience with AI for creation care?
- What innovations have you seen or used to reduce energy usage?



Food (and Agriculture)

- Food causes about 30% of climate change
 - Impacts come from fertilizer, cutting forests, methane, burning crop residue, fuel, refrigeration, transport, packaging, cooking and more
 - Meat causes about 60% of that
 - Dairy production causes about 22%
- About 30% of food is wasted
- Changes in behavior and technology can reduce emissions from food

The true cost of food in the U.S.

Food purchases

Purchases at stores and restaurants only make up about one-third of total food costs.

\$1.1 trillion

Environmental costs

- Greenhouse gas emissions
- Water use
- Soil erosion
- Biodiversity loss

\$805 billion

Livelihood costs

- Child labor
- Unlivable wages
- Lack of benefits
- Occupational health and safety

\$134 billion

Agriculture subsidies

\$12 billion

Human health costs

- Obesity/overweight
- Other diseases (diabetes, hypertension, etc.)
- Food insecurity
- Effects of pollution

\$1.145 trillion

Total cost

\$3.2 trillion/year

Source: The Rockefeller Foundation, "True Cost of Food: Measuring What Matters to Transform the U.S. Food System," July 2021

Innovation to Reduce the Impact of Food

- Free-go in Geneva: Fridges around the city to give and take expiring food
- Olio app
- [Sayvr](#) : Scan ingredients & avoid food waste with tools for smarter cooking
- [Foodcycler](#) or [Lomi](#) for food recycling
- Just Meat at Walmart
- [Fridge Cam](#) to create a smart refrigerator
- Chocolate without cocoa (Nextcoa and [Choviva](#)) or coffee without coffee beans



Transportation

- Transportation causes about 15% of GHG emissions
 - 24% of global energy-related CO₂ emissions
- Cars, trucks, planes, trains, bicycles and scooters
- Affordable electric vehicles with greater range
- Self-driving cars and trucks
- Innovative new e-bikes and scooters



Innovations in Transport

- Newer EVs in the US with 450-mile range
 - Chinese EVs (Nio) over 600 miles
- Joby electric airplanes
 - Helicopters
- Electric foldable electric bike
- Navee scooter – longer range, faster and better suspension



Making Buildings Better

- Homes and buildings cause about 6% of climate change
 - High energy use adds to the total
- Solutions include:
 - Insulation
 - Controls for electricity usage
 - Efficient appliances
 - Heat pumps for heating and cooling
 - Renovation with high efficiency



Homes and Buildings

- Window heat pumps
 - Low-cost option for decarbonization
- Smart home assistants such as [Amazon Alexa or Google Assistant](#) can dim lights, turn appliances on or off, & more
 - Saves energy, water, money and time
- Smart windows can change tint and transparency, directed by electrical signals, which can reduce energy costs
- GE heat pump water heater and heat pump dryer



Fashion

- Fashion causes about 10% of global emissions
- Circular fashion
 - Recycled cotton and polyester
 - Organic waste to produce fabrics
 - Mycellium leather
- Products include:
 - Mycoworks mycelium leather
 - Andie recycled shirts
 - EasyFix repair kit for polyester



Sharing, Discussion and Q&A

Questions

- What innovations might you consider using?
- What mindset changes could you make to focus more on creation care?
- How will you continue to monitor innovations that can enhance your well-being and reduce your climate impact?



Make a Difference

“The only way we’re going to achieve climate goals that have been set is through innovation... That’s the only way forward. We have to innovate our way out of it.”
Chad Syverson, Professor of Economics, University of Chicago

An approach will not involve a retreat from technology, science, art, innovation, and exploration. We need instead to reconsider the purpose of all these human endeavors, to redefine what progress would look like, and to clarify what constitutes good work.
– Douglas Moo

Closing Prayer

Lord of Creation, You provided the sun, wind, and water as sources of life and strength. We pray for innovation in renewable energy that reduces harm to the environment and sustains humanity. Bless scientists, engineers, and entrepreneurs with creative ideas that will bring affordable, clean energy to the world. Let nations adopt sustainable solutions that reduce pollution and protect future generations. May Your wisdom guide us toward harmony with nature instead of exploitation. Amen.

