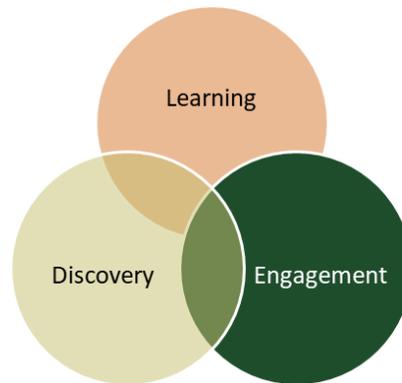


COLORADO STATE UNIVERSITY | ACADEMIC MASTER PLAN
Phase Two – Demographics and Implications
for Education, Research, Creative Artistry, and Engagement
March 23, 2022

Executive Summary

Phase Two of Colorado State University’s Academic Master Plan (AMP) focused on demographic trends and opportunities for education, research, creative artistry, and community engagement at a forum on February 11, 2022. The four topics below, which emerged from discussions in this forum, underscore the importance of reciprocal relationships supporting education, research, creative artistry, and community engagement to the future of CSU.



Demographics and Education

- Expanding or redefining CSU’s niche, including recognition as Hispanic-serving, needs to be intentional. The University needs to be prepared to serve a broader range of learners, such as the following overlapping groups:
 - Students from historically underrepresented and underserved groups, including first generation, limited income, and rural students;
 - Early, mid- and post-career adult learners;
 - Colorado residents.

Research, Creative Artistry, Community Engagement, and Education

- To more fully integrate research, creative artistry, and engagement with education, CSU needs to find ways to make these activities more scalable, emphasizing the following:
 - Mutual benefit to community or industry partners and mentors as well as to students;
 - Integration of research and creative artistry with engagement as communities participate as active partners in these activities.

CSU’s Value Proposition

- CSU needs to make the most of its strengths – its value proposition. The University should bolster its recognition as a world class research university and as THE school of choice for Colorado residents.
 - CSU can emphasize its holistic approach to education as it stresses interdisciplinarity, collaboration and the seven academic themes from Phase One as well as integrated and reciprocal support among learning, discovery, creative artistry, and engagement.

Institutional Strategies for Change

- AMP Phase Two forum participants sought clarity, intentionality, and consistency in procedures and processes that will support these reciprocal relationships.

COLORADO STATE UNIVERSITY
Academic Master Plan

Phase Two – Demographics and Implications for
Education, Research, Creative Artistry, and Engagement

March 23, 2022¹

Colorado State University is progressing through the Academic Master Plan (AMP) process designed to set the University's academic direction for the future. Phase One of the process began in Fall 2021 with an examination of global trends and what they mean for CSU. To launch Phase Two, more than 100 members of the Colorado State University community gathered in-person and via remote participation to discuss demographic trends and opportunities for education, research, and engagement during a February 11, 2022 forum at Lory Student Center.² Discussions at the forum built on the [AMP Phase One – Academic Direction Report](#) and included panels and breakout sessions.

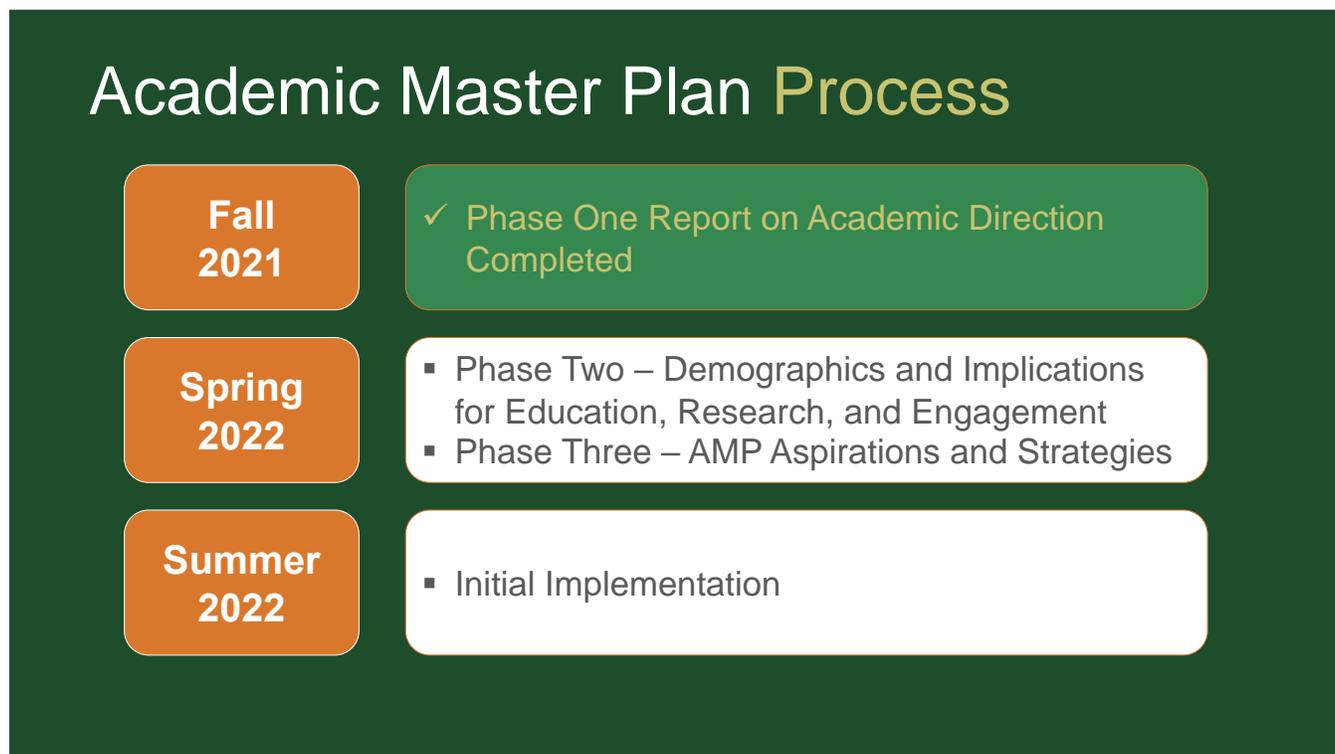
Phase Two of the AMP process focuses on how demographic trends create opportunities for CSU to achieve its academic aspirations. Discussions opened with the seven themes from Phase One, with participants sharing ideas about how to expand CSU's ability to reach more potential learners, integrate scholarship and engagement more fully with education, and initiate change consistent with the Courageous Strategic Transformation (CST).

¹ Revised by the AMP planning team following Advisory Committee discussion and input. The AMP planning team consists of Linda C. Dalton, PhD, FAICP, planning consultant with Dalton Education Associates; Linda Nagel, chair of the AMP Advisory Committee, and Professor and Head, Forest and Rangeland Stewardship; Jenelle Beavers, Vice President for Strategy; Andrea Duffy, Assistant Vice Provost; Kathy DuQuoin, Executive Assistant to the Provost; Pam Jackson, Associate Vice Provost for Communication; and Laura Jensen, Vice Provost for Planning and Effectiveness. The AMP Advisory Committee members include Dr. Nagel; Jennifer Aberle, Associate Dean, College of Health and Human Sciences; Brandon Bernier, Vice President for Information Technology; Amy Charkowski, Professor and Department Head, Bioagricultural Sciences and Pest Management; Kauline Cipriani, Vice President for Inclusive Excellence; Dierdre Cook, Alumna and retired school principal; David Dandy, Professor, Chemical and Biological Engineering; Nancy Deller, Interim Associate Vice President for University Marketing and Communications; Catherine DiCesare, Associate Professor, Art and Art History; Sue Doe, Professor, English, and Chair, Faculty Council; Jody Donovan, Dean of Students; Andrea Duffy, Assistant Professor, College of Liberal Arts, Assistant Vice Provost; Sam Halabi, Senior Associate Vice President for Health Policy and Ethics; Roze Hentschell, Associate Dean, College of Liberal Arts; Chad Hoseth, Associate Vice President for International Affairs; Meggan Houlihan, Assistant Professor, Libraries; Brandon Lowrey, Student, Biomedical Sciences and ASCSU Director of Academics; Shrideep Pallickara, Professor, Computer Sciences; Sandra Quackenbush, Associate Dean, College of Veterinary Medicine and Biomedical Sciences; Monique Rocca, Associate Dean, Warner College of Natural Resources; Lindsey Shirley, Associate Vice President, CSU Extension; Beth Walker, Dean, College of Business; and Lindsay Winkenbach, Ph.D. candidate, Biochemistry and Molecular Biology.

² Please see attached appendix for the February 11 forum agenda.

The summary in this report draws from three sources: the AMP Phase One Report that identified academic themes; several publications about demographic trends and how they affect higher education;³ and the half-day forum involving expert panelists⁴ and more than 100 CSU participants.⁵

The diagram below summarizes the process, showing how the AMP will progress from Phase Two to Phase Three in the second half of the Spring 2022 semester, and then move to initial implementation during the summer. (Please see the [Phase One Report](#) for a fuller understanding of the AMP process, and how each phase strategically builds on its predecessor.)



³ Accenture (2021). Serving all students: A survey of US learner mindsets from age 16 to 65+. Accenture Research Report, October: <https://www.accenture.com/us-en/insights/public-service/serving-all-students>;

Harvey, Bryan C. (2021), Teetering on the Demographic Cliff, Part 1 (SCUP, Planning for Higher Education) <https://www.scup.org/learning-resources/journal/>;

Moldoveanu, Mihnea (2020), A Post-COVID Higher Ed: Which Programs Will Thrive, Which Won't, and Why (Harvard Business Publishing, Education).

<https://hbsp.harvard.edu/inspiring-minds/a-post-covid-higher-ed-which-programs-will-thrive-which-wont-and-why>.

⁴ The AMP planning team expresses its appreciation to the panelists who generously gave their time to prepare for and participate in the February 11 forum. They are listed with their affiliations on the attached forum agenda.

⁵ The AMP team expresses its gratitude to the facilitators assigned to each table during the February 11 forum. In addition to members of the AMP Advisory Committee they included Shannon Archibeque-Engle, Associate Vice President, Inclusive Excellence; Rick Aster, Department Head, Geosciences; James Pritchett, Dean, College of Agricultural Sciences; Laura Sample-McMeeking, Director, STEM Center; Emily Seems, Associate Vice President, Community Affairs and Engagement; Mary Stromberger, Graduate School; and Benjamin Withers, Dean, College of Liberal Arts.

AMP Themes – Additions from Phase Two

February forum discussions highlighted important attributes of interdisciplinarity, collaboration, and the seven AMP themes below from Phase One, indicating how some of them support broader involvement in specific ways. The following points summarize table notes from relevant discussions during the forum and should not be considered comprehensive.

Interdisciplinarity and Collaboration

From Phase One:

- *Colleges and centers were eager to engage in more **interdisciplinary** work; and each of the emerging themes engages more than one college.*

Phase Two additions:

- Critical societal problems are inherently inter- or trans-disciplinary.
- Team research, community engagement projects, co-teaching, and other forms of collaboration help faculty to bridge from their own education in traditional disciplines.

Theme: Arts and Cultures

From Phase One:

- *Extending creative forms and norms beyond Eurocentric (or Western) traditions;*
- *Enhancing the participant and audience (viewer, listener, reader) experience.*

Phase Two additions:

- Arts and cultures bring meaning to education, as to life; and can draw from many traditions.
- Technology can provide access within Colorado as well as to other countries and continents.
- Community engagement with the arts can heighten CSU's visibility.
- Adult learners have an opportunity to explore the Arts and Cultures as personal interests (passions) beyond their careers.

Theme: Data Analytics

From Phase One:

- *New foundational skills, data literacy, privacy, security, and the ethical use of data;*
- *Other key terms: data science, big data, quantum information.*

Phase Two additions:

- Improving pre-college motivation and preparation is critical to attracting more students. E.g., can 4H be reimaged to inspire interest in STEM fields?
- CSU can expand partnerships with community colleges and other institutions to promote pathways.
- Data Analytics is attractive to adult learners seeking opportunities for career development.
- CSU can apply Data Analytics to study and improve college choice and student success.

Theme: Inclusive Excellence

From Phase One:

- *Integrating multiple narratives and complementary perspectives;*
- *Advancing diversity, equity, inclusion, and social justice.*

Phase Two additions:

- The concept of community cultural wealth can enrich CSU's approach to inclusive excellence.
- An inclusive campus climate involves supportive and diverse staff and faculty who incorporate diversity in the curriculum, in the classroom, and in assignments (i.e., moving away from emphasizing Eurocentric traditions and cultures and reflecting the diverse backgrounds and traditions of the University's learners).
- International students contribute to diversity by bringing additional strengths and complementary cultural perspectives.

Theme: One Health

From Phase One:

- *Integrative health: "We will be globally recognized for a transdisciplinary, integrative approach to plant, animal, and human health, with an emphasis on disease, agricultural, and water challenges" (CST).*
- *Other key terms and concepts: global health, environmental health, comparative medicine, health disparities.*

Phase Two additions:

- The One Health initiative is expansive, underscoring its interdisciplinarity.
- Based in STEM, students need to be prepared early for entry into health fields.
- Community engagement is essential to improving and sustaining human and ecosystem health.
- Research and clinical work can be integrated to help keep practitioners current.

Theme: Public Discourse and Democratic Institutions

From Phase One:

- *Communication, dialogue, collaboration, policy-making, engagement, civility;*
- *Concerned with reversing the erosion of trust in government and science.*

Phase Two additions:

- Public discourse is about trust. Improving health, science, and other research communication can build trust in information sources.
- All students need to learn how people engage with complex and contested issues. Dialog across difference must be incorporated into the All-University Core Curriculum (AUCC).
- Community engagement means partnering with communities to have better conversations about what matters.
- The University needs to be a model for constructive public discourse.

Theme: Sustainability and Community Resilience

From Phase One:

- *Broadly defined: "We explicitly recognize that to sustain human life and wellbeing for the future we must accept the interconnectedness of planetary and human health, of living and nonliving systems. And we affirm that sustainable solutions must be interdisciplinary, ecologically sound, socially just, and economically viable" (CST).*

- *Other key terms and concepts: systems thinking, climate change, adaptation, resiliency, life cycle analysis, environmental health.*

Phase Two additions:

- Resilience is becoming an equally important concept as communities prepare to adjust to changes in their physical environment.
- Indigenous people have historical practices regarding Sustainability and Resilience – adding to the imperative for the University to be more explicitly inclusive of Indigenous peoples and traditional knowledge, and to honor CSU’s Land Acknowledgment.
- Sustainability draws from many disciplines and is naturally inter- or trans-disciplinary.
- Sustainability should be a fundamental part of the CSU curriculum and is also something that all members of the CSU community should practice as part of the institution’s educational ethos.

Theme: Technological Innovation

From Phase One:

- *New inventions, their applications and their impacts;*
- *Examples: laser science, bioprocess engineering, internet of things.*

Phase Two additions

- Remote teaching and learning technologies offer opportunities for CSU to reach remote rural areas as well K-12. (“No excuse not to ... now that remote technology is better.”)
- CSU programs need to incorporate digital literacy for students, faculty, and staff; and address the digital divide.

Demographics and Education – Reaching More Potential Learners

Demographic discussions took two distinct paths. One focused on increasing the diversity of CSU’s student population, including historically underrepresented and/or underserved, first generation, limited income, and rural students. The other looked at the potential for better serving adult learners (early, mid- and post-career).⁶ Both discussions emphasized that reaching more potential learners is reciprocal – involving ways to expand the University’s reach in communities across Colorado (e.g., collaborating with other institutions) as well as ways to bring additional potential learners to the University. Both discussions also highlighted the potential value of remote technology, when used conscientiously and inclusively.

Importantly, discussions emphasized that expanding or redefining CSU’s niche, including recognition as Hispanic-serving, needs to be intentional. CSU must be prepared to offer the kinds of academic and engagement programs that are important to these potential learners and to provide the support they

⁶ Forum participants used a variety of terms when referring to different kinds of populations. This report uses learner as the more general term, with occasional use of the term student. Because the term “traditional” or “traditional age” student defines everyone else by what they are not, this report uses terms like “underrepresented and underserved” and “adult learner” to refer to groups that the University would like to involve more in higher education.

need to be successful. Rather than create new academic or support programs alone, CSU can partner with other institutions to learn from their experience and/or offer new programs collaboratively.

Increasing Diversity

Participants recommended clear communications and seamless pathways between the K-12 and community college systems and the University. CSU should involve teachers and counselors (many of whom are CSU alumni) and support programs that facilitate the transition to college, such as summer research and immersion programs, and dual enrollment.

Forum participants highlighted an inclusive approach to higher education that values the assets that diverse, historically under-served, and historically under-represented students bring with them. This approach encourages potential learners to share and build on their strengths. It also calls for the University to prioritize preparing faculty, staff, the curriculum, and support systems to better serve all learners. This includes increasing the diversity of faculty and staff as crucial to creating an inclusive environment for students from a variety of backgrounds.

Appealing to Adult Learners

Discussions about serving adult students emphasized relevance, flexibility, and access. CSU programs need to be more agile and flexible so that course material is current; modular sets of courses with a certificate or badge that appears on a transcript can be stacked toward a future degree; and courses are offered through more flexible schedules, such as during evenings and weekends, or online and asynchronous where appropriate to the subject matter. In addition, they recommended that CSU accept prior course work and award credit for relevant work and life experience. Finally, some programs may need to incorporate bridging coursework for adult learners who are changing fields.

Making the Most of CSU's Strengths – Its Value Proposition

Colorado State Demographer Elizabeth Garner, who served as an AMP Forum panelist, pointed out that the state loses students to higher education institutions elsewhere in the United States, although Colorado also imports students from other states. About two-thirds of CSU's new freshmen have indicated that CSU was their first-choice college.⁷ However, less than one-fourth of the students admitted as freshmen to CSU actually enroll.⁸ CSU needs to analyze why and where those admitted students go. As the number of high school graduates in the United States declines, institutions in other states are likely to compete more strongly for Colorado residents.

Forum participants suggested that more generous scholarships and financial aid could help. In addition, they stressed that CSU needs to market itself more effectively to a wide range of potential

⁷ Results from 2019 CIRP Freshman Survey (pre-pandemic data from the most recent survey conducted for CSU).

⁸ Institutional Research data show that yields vary by student group within this overall average. Yields for CSU declined after students began using a common application form, which allows them to apply to multiple universities simultaneously.

learners. The University could stress its strengths in providing a world-class education that prepares them for their future lives and careers and in supporting students to persist and graduate in a timely manner (as compared with online programs). The University can publicize its expertise, achievements, and leadership in the seven AMP themes and showcase pathbreaking research and extension activities.

Overall, forum participants felt that CSU needs to do a much better job of branding and communicating the University's strengths to reinforce its image and achieve wider recognition as ***THE school of choice for Colorado residents.***

Research, Creative Artistry,⁹ Community Engagement, and Education

Research, creative artistry, and community engagement are evolving from complementary enterprises, with the former emphasizing the creation of new knowledge and understanding, and the last more focused on applying knowledge and skills beyond the academy to more integrated activities directly involving communities in research and creative artistry. As forum participants described numerous successful examples of how faculty research and community engagement can involve students, they recognized how the projects or communities as well as the students benefit. The discussions about involving students shared some common features – importantly both discovery and engagement are “high impact” practices for student success because they involve experiential (and/or service) learning and developing relationships with faculty, staff, and/or industry mentors. Internships and field placements also fill part of the demand for experiential education.

Participants stressed that earlier in a student's career is better – opportunities for experiential learning should not be limited to upper division and graduate students. Indeed, some suggested that exposing potential students to research and engagement (e.g., with a traveling discovery bus) can motivate them to attend college and select majors that might not have otherwise appealed to them. Both discovery and engagement add meaning and value to higher education that students appreciate.

Sadly, these opportunities are not universally available, in part because they require effort and may not provide sufficient financial support, particularly for students who need to work while enrolled. ***In sum, to broaden the benefit to students, CSU will need to find a way to make student research and community engagement activities more scalable.***

⁹ Vice President for Research Alan Rudolph opened his remarks by stressing that the term “discovery” represents the range of scholarly activity at CSU better than the more traditional terms “research” or “scholarship,” in part because it is more active and engaging, and more readily incorporates creative artistry as well as scientific research. However, Ernest Boyer distinguished the scholarship of discovery from other kinds of scholarship in his seminal work, so this report retains the term research and adds creative artistry – See ***Scholarship Reconsidered*** (New York: Carnegie Foundation for the Advancement of Teaching, 1990).

Institutional Strategies for Change

Forum participants stressed that the ideas they suggested for broadening CSU's demographic draw and for integrating discovery and community engagement more fully with education depend on institutional support as well as the commitment and energy of faculty and staff.

Many of their strategies for change started with identifying barriers that need to be overcome. The following exemplify common concerns and suggestions, many of which have also been articulated during CST deliberations. ***Above all, forum participants sought clarity, intentionality, and consistency in procedures and processes.***

Priorities and Action

- Recognize and build on existing strengths
- Reduce or eliminate lower priority activities to make time for new and higher priorities
- Follow through on commitments before adding new expectations

Incentive and Reward Structures

- Restructure the budget process, moving away from incremental toward more strategic funding
- Incorporate incentives for priority work
- Address salary and workload discrepancies

Academic Processes and Procedures

- Facilitate interdisciplinary relationships within and among colleges
- Streamline procedures for curriculum proposals
- Review the academic calendar and course scheduling to encourage more flexible formats
- Reconsider course requirements and prerequisites
- Clarify processes, structures, and relationships for centers and institutes

Operational Efficiencies

- Streamline human resources procedures

Professional Expectations

- Reconcile promotion and tenure expectations with the land grant and CSU missions
- Reconsider annual review documentation to allow more flexibility and to be forward-looking
- Reward interdisciplinary work, recognizing the additional time and effort involved
- Support mentoring, recognizing the commitment required

Investment in People

- Recognize the human fallout from the pandemic
- Support innovation and accept that failure may sometimes follow
- Give faculty and staff agency
- Provide time to plan for and adjust to change
- Treat students, staff, and faculty holistically
- Increase faculty and staff diversity
- Nurture the community described in CST

Note: Below is the agenda for the Phase Two forum.

ACADEMIC MASTER PLAN
Phase Two Forum | February 11, 2022
Demographics and Emerging Opportunities for Education, Research, and Engagement

Refreshments - 7:30 am

Welcome and Introduction to the Day - 8:00 am

- **Provost Mary Pedersen** – Welcome and vision for the Academic Master Plan at CSU
- Connections: Research (VPR **Alan Rudolph**); Engagement and Extension (VP **Blake Naughton**)
- **Jenelle Beavers**, VP for Strategy – Update on CST and connection with AMP
- **Linda Dalton** – AMP: Review of Phase One
- **Linda Nagel** – AMP: Review of Phase One outcomes, Intro to Phase Two

PANEL 1 – Demographic Implications for CSU – Introduction to Discussion 1. **Linda Nagel** to moderate
Summarize articles as starting point for each panelist discussion (3 articles)

- **Elizabeth Garner**, State Demographer and Economist (follow up from October)
- **Kauline Cipriani**, VP for Inclusive Excellence, AMP Advisory Com
- **Shannon Archibeque-Engle**, Associate VP for Inclusive Excellence, HSI
- **Brandon Bernier**, VP for Information Technology, AMP Advisory Com

Discussion 1 – Consider the differences between current and future audiences for your theme. What additional or different demographic groups should CSU try to reach, including non-traditional populations? What different kinds of programs or approaches should CSU offer to reach a **broader audience (for education, research, and community engagement)**? What kinds of **technology** might be helpful in reaching out to different demographic groups?

PANEL 2 - Research and Engagement – Introduction to Discussion 2. **Linda Nagel** to moderate

- **Jan Leach**, College of Agricultural Sciences Research Associate Dean
- **Kristy Pabilonia**, Director of Clinical Diagnostics for Veterinary Health System (CVMBS)
- **Lindsey Shirley**, Assistant VP, Office of Engagement and Extension, AMP Advisory Com

Discussion 2 – Discuss how to strengthen the **connection** between **education, research, and engagement** for your theme. How might current connections be strengthened? What opportunities do you see for establishing new relationships? What formats can CSU adopt to strengthen the connection between research, engagement, and education in the future?

PANEL 3 – Strategies – Introduction to Discussion 3. **Linda Nagel** to moderate

- **Beth Walker**, Dean, College of Business, AMP Advisory Com
- **Jenelle Beavers**, VP for Strategy, Connection to CST, AMP Advisory Com

Discussion 3 – Continuing your earlier discussions. What strategies does the University need to take to fulfill these aspirations? How can CSU overcome any existing barriers? What would it take for a more dramatic or **courageous** shift in audience or approach? What **modest** change could be implemented relatively easily?

Lunch with Synthesis of Discussion by Selected Listeners (including the Panelists) - noon

Adjourn - 1:30 pm

AMP Phase One Themes: Sustainability, One Health, Technological Innovation, Data Analytics, Inclusive Excellence, Public Discourse and Democratic Institutions, Arts and Culture