

# UBC SURVIVE AND THRIVE APPLIED RESEARCH (STAR)

## WHAT IS STAR?

STAR is made up of researchers, partners and a world-class technical platform working together.

### GLOBAL RESEARCHER NETWORK

A network of researchers at UBC's Okanagan and Vancouver campuses, connected to colleagues in Western Canada, the UK, and around the world.

Faculty and student researchers come from all disciplines—because problems don't have disciplines.

### PARTNER ORGANIZATIONS

Partner organizations in private, public and NGO sectors leveraging university-sector research to see further into present and future challenges to human performance in sport, health and defence.

### FACILITY

A UBC research facility connecting a pool of equipment to the STAR Hub on the Okanagan campus, where 3D scanning, rapid prototyping and testing capacity are complemented by an off-campus blast and ballistic laboratory.

## WHAT DOES STAR DO?

STAR brings the power of collaborative R&D to human performance challenges in extreme environments.

STAR's key challenges are to bring R&D in intelligent materials and decision-support to extreme environments, from individual worker, athlete, soldier or patient to regional crisis:

### BEFORE AND AFTER DISASTER

Better understanding of the causes of crisis leading to injury at individual to regional scale, and the conditions of resilience enabling a return to normal. From better sport and military helmets to new standards for measuring pilot fatigue, we convene cross-sectoral dialogue to ask the right questions, turning complex challenges into solvable problems.

### INTELLIGENT MATERIALS

Advances in composites, nano-materials, additive manufacturing and the internet of things are opening the way to new generations of protective materials capable of communicating in their operating environments.

### DECISION-SUPPORT

We take an integrative approach to multi-source data analysis, simulation and foresight, supporting earliest hazard awareness to return to normal.

We bridge university research with partner know-how, developing technologies, standards and strategies for safer lives.

## WHO DOES STAR WORK WITH?

STAR solves problems from technical services to multi-year consortium-driven R&D.

### DAILY PROBLEM SOLVING

STAR staff provide technical services on a fee-for-service basis in our research facilities. We invite partners to join us in our on-campus incubator, at a hot desk in our off-campus facility, or in UBC Okanagan's new Innovation Precinct adjacent to Kelowna's airport gateway to international markets.

### INTERDISCIPLINARY, COLLABORATIVE R&D

STAR projects are problem-driven, bringing most relevant researchers from wherever they are to co-define problems and co-construct solutions with partners, often pioneering new consortium models to de-risk the search for innovative leaps forward.

### A NEW BRIDGE FROM THE UNIVERSITY SECTOR TO REGIONALLY-PRESENT PARTNERS

STAR supports regional development by engaging small and medium firms in value chains driven by medium and large firms occupying leading, long-term roles in our R&D consortia.

---

**CONTACT:** Dr. Keith Culver, Professor and Director, STAR | Survive and Thrive Applied Research  
University of British Columbia Okanagan Campus | Kelowna, BC | [info.star@ubc.ca](mailto:info.star@ubc.ca) | [star.ubc.ca](http://star.ubc.ca)



THE UNIVERSITY OF BRITISH COLUMBIA  
Survive and Thrive Applied Research (STAR)