




KNOWLEDGE TRANSFER Roadmap 2024					
Frequent communication with CBB partners at national laboratories and in industry to promote the transfer of technology and prepare graduate students for productive careers in these sectors.					
	FY 22	FY 23	FY 24	FY 25	FY 26
Objectives	Deliverables				Impact
CBB shares its knowledge with accelerator scientists and related disciplines	CBB knowledge shared through journal articles, conference proceeding articles, presentations, data sets, technical drawings and other media.				 CBB graduate students present their research at conferences.
	Strong engagement with the accelerator and end use communities through conference organization, community service, and research collaboration.				
CBB discoveries and designs are incorporated into a new generation of accelerators and commercialized as products	Transfer of photocathode with MTE < 35 meV & QE > 10 ⁻³ at high laser fluence (XFEL)				 Visit to FEI production clean room for testing high-brightness technologies.
	Transfer of robust photocathode with MTE < 35 meV at high laser fluence and field (compact XFEL)				
	Transfer of robust photocathode with MTE < 100 meV and QE > 1% at high average current (EIC)				
	Transfer of a photoemission source with sub-100 nm spot size (microscopes)				
	Transfer of non-Nb, high efficiency or high field surfaces				
	Transfer of ML techniques for tuning the aberrations in electron microscopes				
Incorporation of other discoveries into new accelerators or commercialization as products					
Trained graduate students bring critical skills to industry & labs	55 trained graduate students who are able to transfer their skills to industry and national lab partners				 A new generation of scientists

Figure 14. The Knowledge Transfer roadmap. Light shading indicates partner identification and research collaboration, and dark shading indicates method transfer.

