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Darwin Core Data Standard

an evolving universal standard for
observational data and applications for DFO

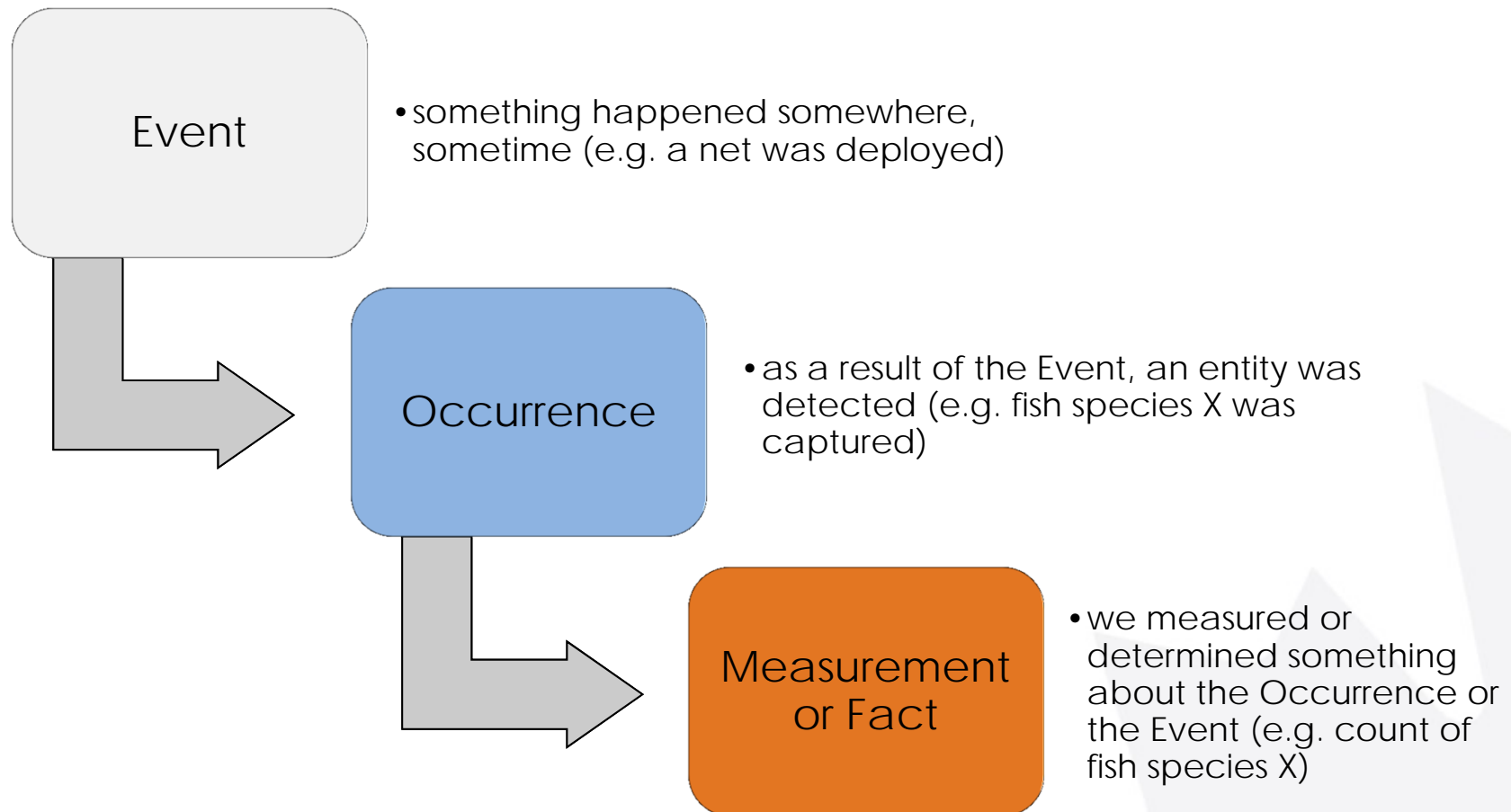
Darwin Core Overview

- model for “observational” data
- terms and definitions that facilitate the exchange of information about the geographic occurrence of organisms
- supports extensions for domain-specific information
- useful in data publishing and data quality improvement
- <https://www.tdwg.org>
- <https://github.com/tdwg/dwc>

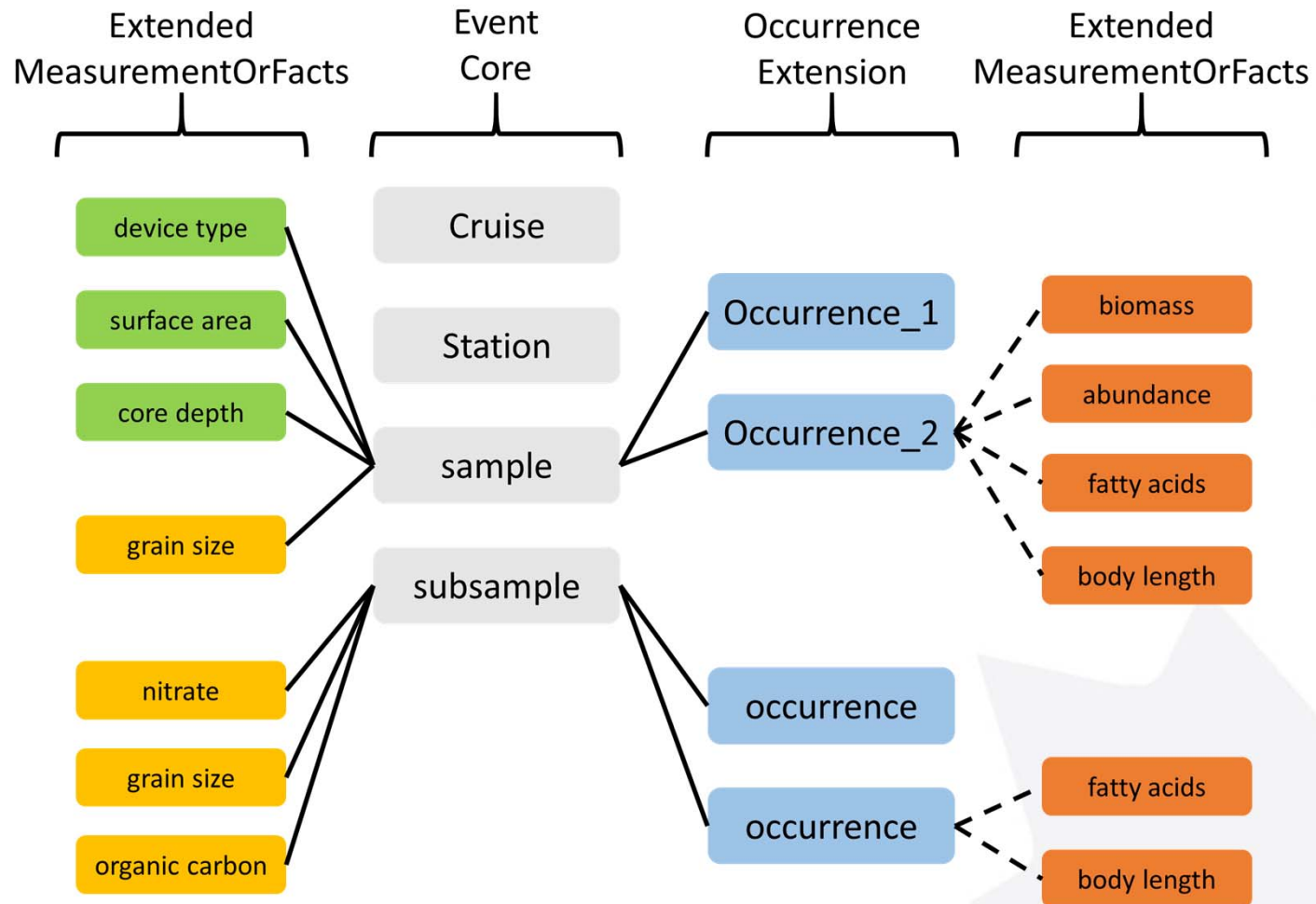
Why Darwin Core (or any Standard)?

- reduce time spent transforming data from various formation
- allow for integration or datasets from multiple platforms
- Darwin Core (DWC) is emerging standard
- related to international initiatives that Canada has committed to supporting

DWC Data Model (The Basics)



OBIS-ENV-DATA Schema (Advanced)



Ocean Biogeographic Community

- Global Ocean Observing System (GOOS)
 - Canada's contribution: CIOOS
 - USA contribution: IOOS
- International Oceanographic Data and Information Exchange" (IODE)
- Ocean Biogeographic Information System (OBIS)

Tools

- R tools for OBIS data access ("robis" R package)
 - <http://www.iobis.org/manual/access>
 - <https://github.com/iobis/robis>
- R tools for data enhancement and quality control ("obistools" package)
 - <https://github.com/iobis/obistools>
- database connectivity for R ("rodbc" package)

Potential Next Steps

- mapping of databases to DWC
- generation of datasets using OBIS-ENV-DATA schema
- participation in data vocabulary community
- exploration and development of tools for analysts

Questions?

- Darwin Core
 - <https://www.tdwg.org>
 - <https://github.com/tdwg/dwc>
- OBIS
 - <http://iobis.org/>
 - <http://www.dfo-mpo.gc.ca/science/data-donnees/obis/index-eng.html>
- R Tools
 - <http://www.iobis.org/manual/access>
 - <https://github.com/iobis/robis>
 - <https://github.com/iobis/obistools>