

# Stencil Library - Ideas

- It is challenging to develop a stencil library
  - There is no big chunk of work that can be hidden behind a API call (e.g. matrix multiplication)
  - The actual update function of the stencil is heavily application specific and performance critical
- We use a DSEL like approach (Domain Specific Embedded Language)
  - “Stencil language” embedded in C++
  - Separate description of **loop logic** and **update function**
  - During compile time generate optimized C++ code (possible due to C++ meta programming capabilities)