# PRODUCT CODES RESERVATION SERVICE

We will need a web service outside of both STEP and Infoflo to manage Infoflo and STEP new product code requests. The service will need a queue to process Infoflo and STEP requests, one at a time, first-come-first-serve to avoid potential reservation conflicts.

1. Datawarehouse PIM DB (SQL Server)
   1. Need a table to store all standard product codes, i.e. all 6 digits codes not starting with letter currently used by Infoflo.
   2. The table should have only one field for product code.
2. Infoflo,
   1. When a user enters a BOM display screen with a product code Infoflo verifies if code exists in item master. If it exists it will display the item data (in editable or non-editable screens, see Infoflo design). If it does not exist it will call the web service to reserve the code. If the code happens to be already reserved by STEP but not yet send to Infoflo, an error code should be returned and a message displayed to the user.
   2. If a new code has been reserved but the user leaves the screen without saving, the service should be called again to release the product code.
3. STEP,
   1. When a user initiates a product creation in STEP it can be for one or multiple products at the same time. Early in the creation process we will reserve product codes for all products in the request, all at once. This means the service can be called upon to reserve one or many product codes in just one call.
   2. The STEP user can enter 0 to 6 digits for the desired product code(s). 0 digits means the service is free to assign the first available number, 6 digits means the service should only try to reserve the specified product code. In between, the service should look for the first available product code(s) starting with the root given by the requestor. If the service cannot find available number(s) it will return an error code.
   3. For the case in which the requestor leaves the product code totally open, we will need to tell the service if the request is for an HMK product or an IPX/CPL one. If the request is for HMK, the available range is 800000-899999. For IPX/CPL, it is 001000-799999.
   4. When the request is for multiple product codes, the user has 3 options: consecutive, preferably consecutive, first available.
      1. Consecutive numbers can only result in the reservation of X consecutive product codes or an error
      2. Preferably consecutive will first try to find X consecutive product codes and in case of failure will just look for the first available X product codes
      3. First available will look for the available X product codes (not necessarily consecutive)
   5. STEP will ensure that there is more product codes possible than product codes requested, i.e. you cannot ask for 20 codes and provide the first 5 digits leaving only 10 possibilities.
   6. In case the product creation request is abandoned before the product is synchronized with Infoflo, the product code(s) should be released. After integration with Infoflo, the code(s) are reserved forever.
   7. We need to implement a Gateway Integration Endpoint in STEP to call the product codes reservation service from within a business rule.