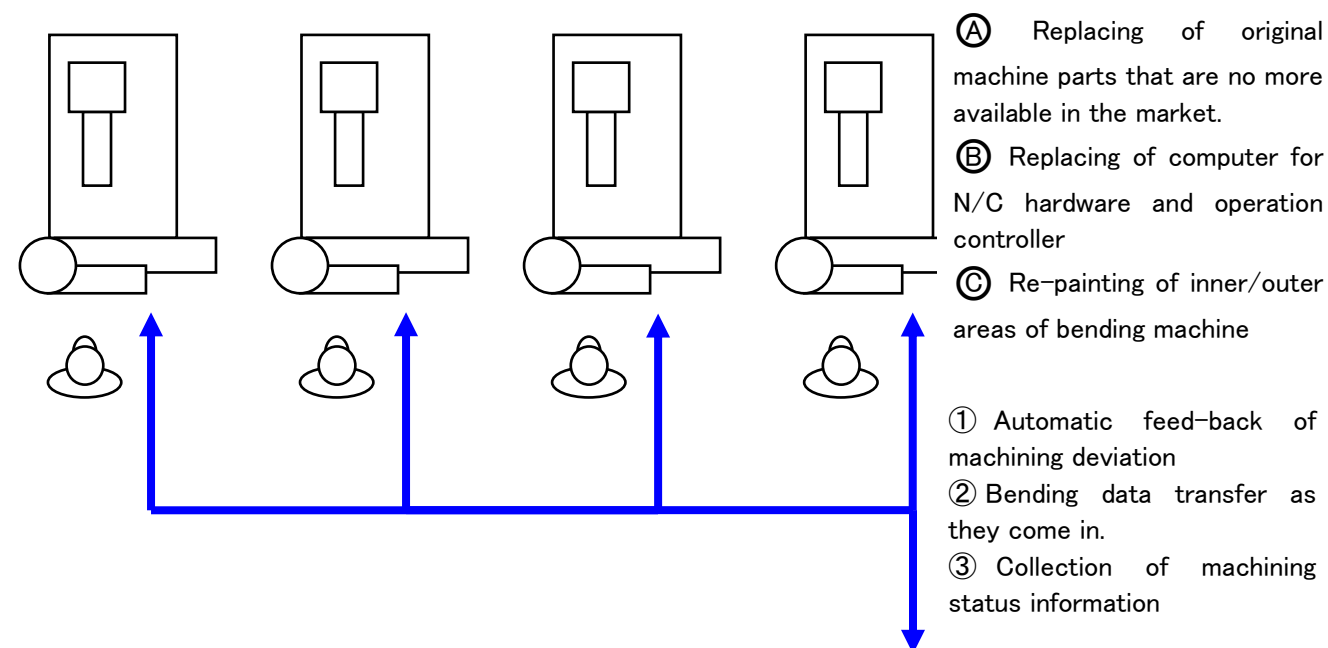


Pipe-working factory of new generation

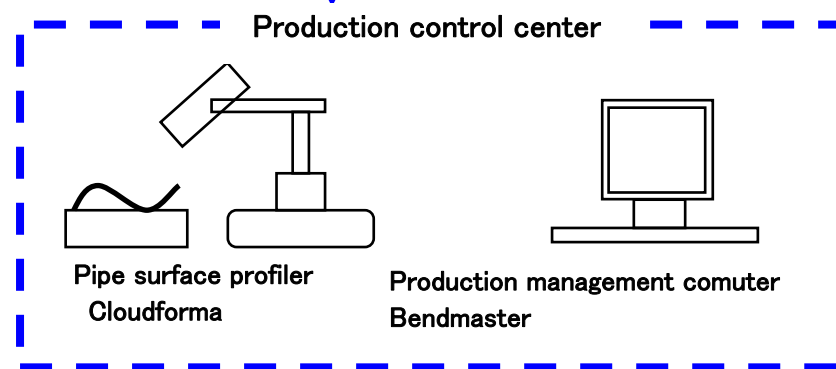
Production of prototyping/quick delivery required and non-repetitive items

By remodeling current bending machines to upgrade for extended service life and with the 「Bendmaster」 and 「Cloudforma」 to be newly in-lined to the machine, quick 8-hours prototyping response comes to reality with a work piece at manual loading at minimized level of required tool-setting material loss.

Quick 8-hours prototype response powered by renewed bending machine and supporting peripherals



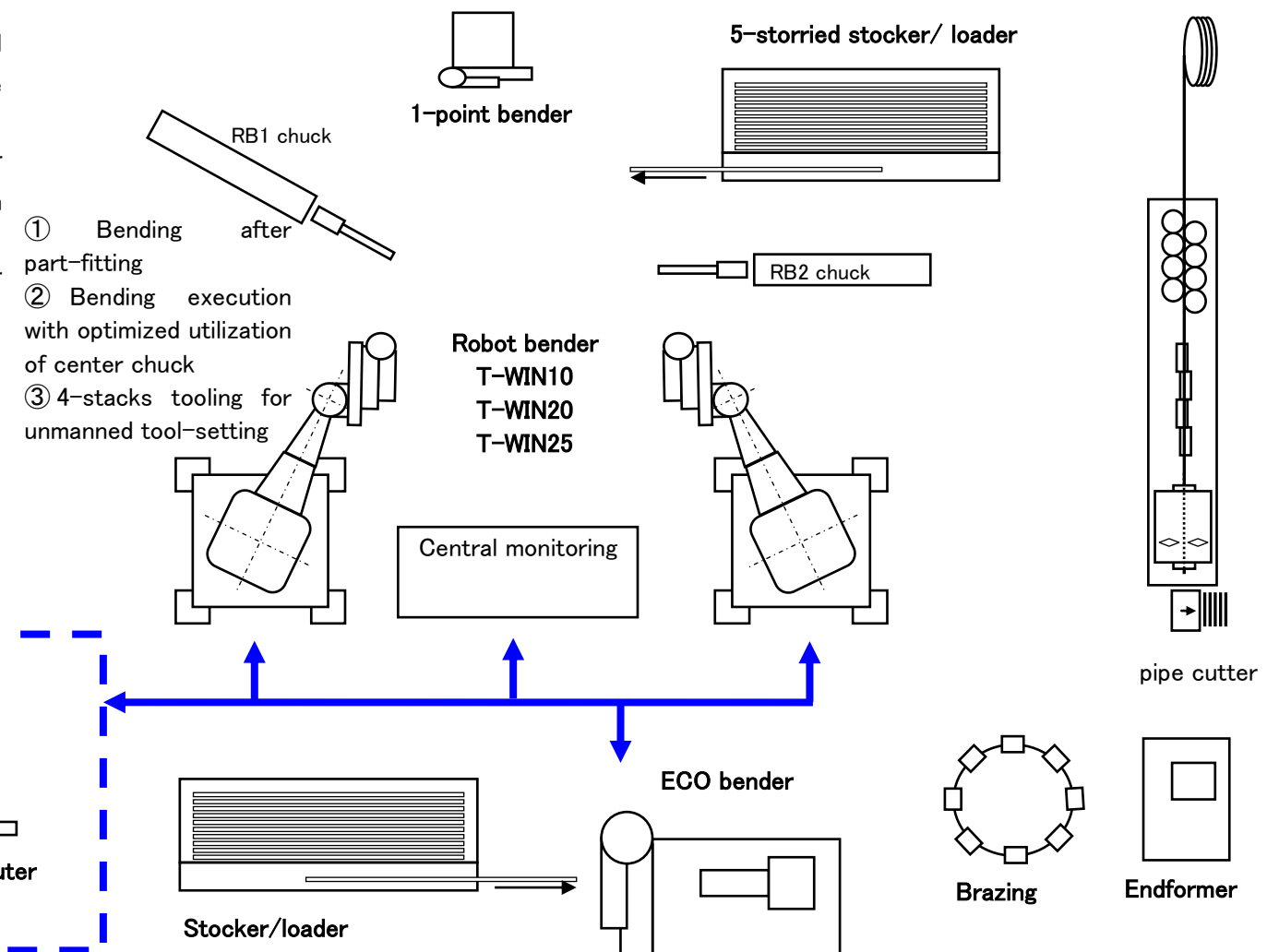
Benders scheduled to be disposed
Old benders not worth for investing life-extension cost



Mass-/non-mass production & repetitive production

24-hours operation system of new generation can be built with the robot bender, one-point bender and 5-story stocker/loader all in-lined communication system. Thanks to the bender's DOB motion simultaneously at its loading/unloading process as one feature, 2-5 times enhanced productivity with fewer operators and setting-work can be designed even for work pieces mixed in length and diameter.

24-hours continuous production by the robotic benders with supporting peripherals



Cloudforma (Pipe surface profiler)

- (1) Regardless of tool-setting repeatability, quality part can be produced immediately after the first trial machining is over. So is to a work piece with pre-mounted fittings.
- (2) Inspection tool: Thanks to the power of electronic inspection, tool-less testing is made. Operation as easy as for one-day training. Tested result to be output as fast as in 1 to 10 minutes.
- (3) Automatic compensation for machining error requires no production skill to an operator, and allows immediate start-up for quality production.

Bendmaster (Production management software)

- (1) All bending data from Opton's benders of old models and of new models are jointed and integrated for the total production management.
- (2) Bender operation management, production instruction for the work piece on the latest or on-going production, data transfer and automatic notification of production completion
- (3) Easy search and down-loading of bending data, Output of production management tables