bizhub
Product Design
Concept
Konica Minolta’s bizhub was designed to insure that anyone, regardless of age, gender, body size, or disability could comfortably use it. With the ability to print, copy, scan, fax, e-mail and store data all in one place, the bizhub is a tool the whole office will use. So, in designing bizhub, we wanted to make certain that each and every person in the office could actually use it. We designed bizhub based on the seven principles of Universal Design®.

1. Equitable use
2. Flexibility in use
3. Simple and intuitive
4. Perceptible information
5. Tolerance for error
6. Low physical effort
7. Size and space for approach and use.

But we didn’t stop there. We looked at the product from four distinct viewpoints; usability, accessibility, handling and style. By complementing the Universal Design principles with these four principles, we were able to build mechanisms to eliminate confusion and error during operation, make documents easier to retrieve, ease fatigue, reduce physical burden and simplify servicing. Finally, we even considered the physical materials in our process, significantly minimising toxic substances in the bizhub’s parts, creating a more recyclable end product.

*Copyright © 1997 NC State University, The Center for Universal Design.
EVERYONE in it.

bizhub boasts an array of features, both tactile and visual, that helps just about anyone access and use all of its functions.

Accessibility
bizhub's drawers, handles and levers require very little physical effort to utilise.

Usability
bizhub was designed with logical and intuitive controls, easy front access and clear, colour-coded instructions.

Handling
bizhub's low-impact, yet stylish design complements the space and colouring of almost any office environment.

Style
Usability

Described for the way you want to work.

Intuitive processes, logical interface design, convenient front access and clear instructions make bizhub incredibly easy to use.
[Interface Design]

The main interface control panel, including the LCD touch screen, of bizhub was designed to be clear, intuitive and concise. Its layout is simple and requires no previous experience or special skills to be able to operate it. The layout of the interface, as well as the size of the controls, makes operation easy, especially for the most commonly used buttons. bizhub’s interfaces were also designed similarly from model to model, so if you become familiar with one, switching to a different model is a snap.
[Front and Side Access]

We designed bizhub with front and side access to allow users to more easily perform some of its most common operations. This provides all the space needed to service bizhub and it makes physical operations less cumbersome. Front access makes replacing paper or toner cartridges easy. A wide-opening side door offers a large workspace and provides access to the transfer unit, fixing unit and more.

Front access offers ample working space and comfortable operation while changing paper and toner cartridges.

A wide-opening side door allows access to a majority of bizhub’s paper routing operations.
Potentially hazardous parts are conveniently colour-coded in yellow.

The paper scale on the top of the machine utilises clear and concise labelling.

[ Visual Cues ]

One of the bizhub’s most noticeable design features, the single white line traversing its length and width, is also one of its most useful. The “information line” utilizes easy-to-read, blue and red LEDs to keep you apprised of printing and data reception status, paper tray depletion and other various indications. To prevent mistakes, as well as clearly and safely identify dangerous parts, we’ve designed animation guidance as well as visual servicing and operation instructions. These tools help to reduce down time and potential harm to the user by providing clear, direction on how to change toner, replace paper, remove the occasional paper jam and more. Instructions are clearly labelled and most use animation or pictures instead of words so that anyone can understand the process. And, we used colour-coded stickers and parts to visually group similar actions. Also, high contrast paper trays as well as transparent parts on the ADF make it easier to locate paper while it’s on the machine.

Potentially hazardous parts are conveniently colour-coded in yellow.
Accessibility

Built for a "universe" of users.
Designed with special features so that it can be operated by almost anyone.

In the true spirit of Universal Design, bizhub is packed full of features that make it accessible to all and easy to operate regardless of age, gender, body size or even disability. The front interface panel tilts up and down in three stages as well as left and right, making it accessible to just about anyone. Furthermore, the colour LCD touch screen is large (800 x 480 pixels) and easy to operate, and with the touch of one button, can be enlarged for even easier reading. The blue LED start-up button and data lamp are also easy to read, especially for those with colour recognition problems. Finally, an optional Assist Handle makes it simple to lift the cover, even while seated, and our ADF’s free-stop feature makes document handling a snap.
Handling

Constructed for simpler physical operation.
**bizhub** was built with easy-opening drawers, large handles and ergonomic paper trays.

Obviously, we took great care to simplify the more complex operations of bizhub. But we also thought about the more physical tasks: designing all of bizhub’s external and internal covers, handles and levers to perfectly fit the hand for easier operation. We designed all of the paper cassette handles on bizhub so that they can be grasped from above or below, and we made them effortless to pull. This means that even the bottom drawers can be opened and closed easily. Finally, the paper trays on bizhub are large and feature concave centres and sides for easy paper retrieval.

*Large, easy-to-grasp handles.*

*Optional Job Separator trays separate print/fax output from copy output.*

*Concave centres and sides make paper retrieval easy.*
Style

Modern styling adds flair to any office.
We gave the bizhub a slim and compact design that maximises office space while helping to increase user efficiency. Its simple, yet sophisticated, black and white colouring blends as perfectly in a modern office as in a more conventional one. This unobtrusive and professionally stylish form contributes to putting people at ease while using it.

**bizhub’s size and style complements any office environment.**
Featuring a simple but bold design and highly unique colour scheme, bizhub reflects the vision of its designers, who created this unique machine to meet customers’ needs and enhance overall office comfort.

Yoshitaka Isogai
bizhub Product Designer

“The product concept of the new bizhub series was to establish a whole new way of working based on enhanced networking functions, and to do so in a straightforward and easy-to-understand fashion.

We aimed to reposition bizhub as a networking gateway, not simply another conventional copier. After repeated discussions, we decided to centrally group the sections that display information, and we emphasised them with white lines to symbolise a network, and to provide excellent contrast against the black body. We also used black to improve the visibility of paper-handling areas, to assist users when setting documents in place, and to enable at-a-glance recognition of the output paper. This sectional use of black greatly enhanced the overall colour balance. Of course, we also made sure that the unit would appear stylish and attractive, but not distracting, in an office environment.

One of the main features of the new bizhub is its control panel. It tilts up and down as well from side-to-side. The control panel features blue LEDs, which are easily recognised by users with impaired colour vision. To determine the most appropriate position for the side-to-side rotation of the control panel, we conducted simulations based
Designers

on a statistical approach. This was done to ensure easy use by both tall and short people, as well as people in wheelchairs. We also conducted a number of simulations to determine the optimum size and shape of various parts; such as the heights and depths of paper trays, the shape of the handle on the automatic document feeder, the position of the paper cassette handle and the texture of the paper feed tray surface, among others.

We adjusted the contrast of the arrows and characters indicated on the inside and outside of the machine, as well as the illustrations and other indications on the control panel display. And, we chose a contemporary font to clean and refine the appearance.”

Yusuke Ikeda
bizhub GUI Designer

“Our design considerations also extended to legibility improvements on the high-resolution colour LCD. We created a new alphanumeric font to ensure that the characters were large, sharp and easy to read. Then we maximised the characteristics of the colour LCD through software design. For example, we selected indication colours that are easy to see by users with impaired colour vision, and added a "Search by Purpose" help menu to make searches easier. The screen for the fax/scan functions features a zoom function, and the printer driver supports text recognition software.”
Disclaimer: “The Principles of Universal Design were conceived and developed by The Center for Universal Design at North Carolina State University. Use or application of the Principles in any form by an individual or organisation is separate and distinct from the Principles and does not constitute or imply acceptance or endorsement by The Center for Universal Design of the use or application.”

bizhub is a registered trademark or trademark of
KONICA MINOLTA
BUSINESS TECHNOLOGIES, INC.

KONICA MINOLTA
BUSINESS TECHNOLOGIES, INC.
1-6-1 Marunouchi Chiyoda-ku, Tokyo, Japan
http://www.biz.konicaminolta.com