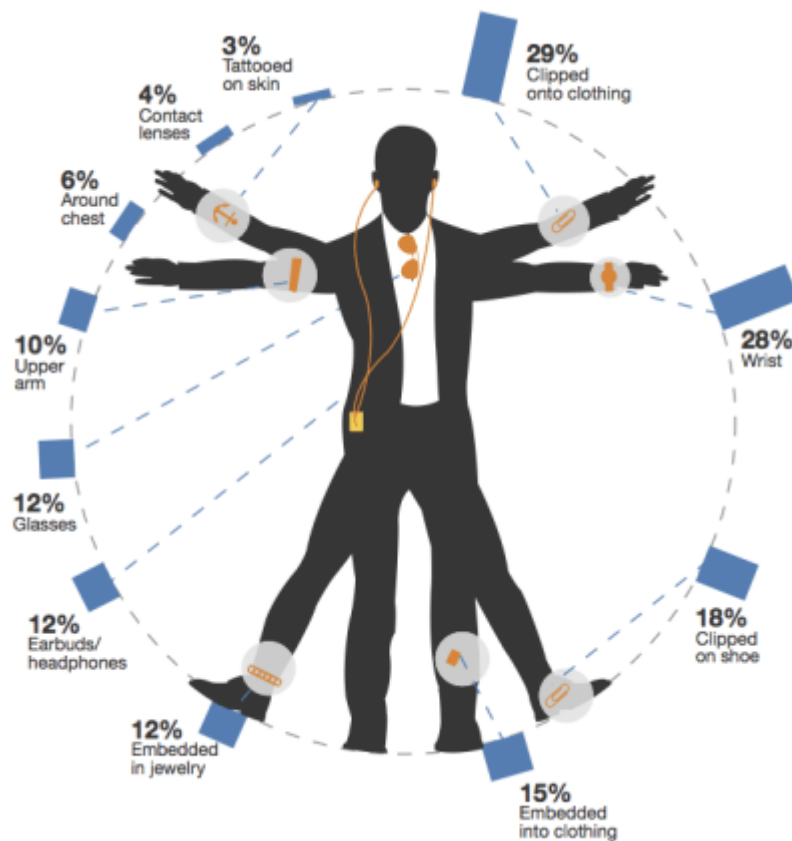
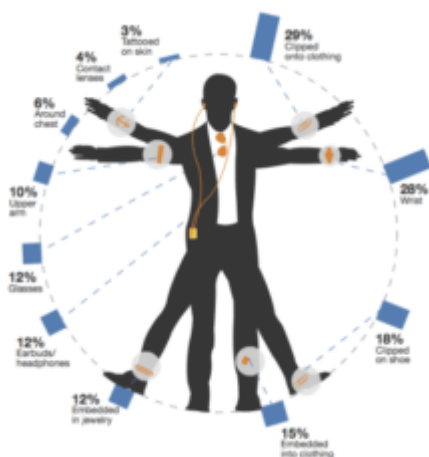




Industrial Wearable Devices Are Coming

BY LUIGI DE BERNARDINI | TUE OCT 21 2014



In the last few months we have witnessed an acceleration in the availability of wearable devices. From Google Glass and the various armbands that can monitor physical behavior, to watches that integrate tracking, information and interaction features.

We already know that the wearable devices market is important from the point of view of the consumer, but will it be as important from the industrial point of view?

Michael Hugos, principal of the Center for Systems Innovation, writes in a blog post: "What we now call the Information Age is only a variation on the old Industrial Age, because most companies are still using information technology primarily to improve traditional industrial processes by lowering costs and increasing productivity. That's fine, but it's no longer enough. The new age that this century will be known for is going to create completely new products and services that will enable completely new ways of working and living. Great fortunes will be made by those who deliver those products and services."

The use of smart devices in manufacturing will be an interesting and challenging period, but not without pitfalls.

Can wearable devices really be part of this industrial revolution and change the habits of operations management? Looking at the investment and reactions of major companies whose core business is management of manufacturing processes, I would say definitely yes.

The market for wearable devices was around \$750 million in 2012 and is expected to grow to \$5.8 billion in 2018, a massive growth that goes beyond mere market penetration to market revolution. In manufacturing, use of these devices is already illustrating their capability to change habits.

Take, for example, the ability to provide operators with "smart" bracelets or watches, able to detect when they enter the perimeter of the plant, record their presence and communicate to them the daily task or the line to which they are assigned according to the production schedule. The operators in the plant could be connected with more experienced operators in the control room, who are able to support them in the management of everyday problems through video guidance. This would allow them to see exactly in real time what the operator sees in the field, ensuring that all operations are carried out in the best possible way.

Information related to loss of production efficiency, quality problems, production volumes, need for reallocation of resources or maintenance, and schedule changes will be signaled by a vibration of the device to the closest person in charge, so that attention is drawn only when necessary. This means the operator does not have to refer to something continuously to ensure they're performing the required reactivity. Through the same device, operators can interact with the control system, assigning tasks, reallocating resources or sending messages to other users.

The systems will, of course, become much more sophisticated, allowing management of more information about operators (for example, fatigue or stress level) so as to optimize work and safety. This opens up completely new scenarios, the realization of which does not depend on the availability of new technologies under development, but only by the foresight and imagination of those who connect the various components to obtain a completely new system.

Certainly for those of us engaged in improving the management of operations, the use of smart devices in manufacturing will be an interesting and challenging period, but not without pitfalls. The acceptance of this form of control by the operators is not obvious and could generate social problems, but this is a normal part of any industrial revolution.

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