

HERMAN MILLER FURNITURE SYSTEMS

# **THE PERSONAL WORKPLACE**

**A system of office furniture designed for  
comfort**

VOLUME NUMBER

**9**

**BUSINESS PLAN**

**DEVELOPMENT, PRODUCTION, SALES AND MARKETING**

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# **THE PERSONAL WORKPLACE**

**A system of office furniture designed for  
comfort**

**NEW BUSINESS PLAN**  
DEVELOPMENT, PRODUCTION, SALES AND MARKETING

Draft for discussion with Rob and Gary

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*Time*

# **LOW PROGRAM-COST EVOLUTIONARY APPROACH TO DEVELOPMENT OF THE PERSONAL WORKPLACE**

## **1. Broad base assumption — System of 36 items available within three years.**

We aim to create a system with a total of about 36 items by the end of three years. This system will cope with single office and multiple workstation layouts, and will ultimately be able to appeal to the full spectrum of needs of an office-based organization. We can presently identify most of these 36 items in detail, although a handful pose unanswered questions.

## **2. Importance of the whole**

The main idea is to get the system going, as a whole, within a finite and feasible amount of time. The minimum whole would be a system of about 12-14 items of furniture, sufficient to allow personal layout of individual offices, and capable of producing the holistic environment demonstrated at CES showrooms.

It is therefore necessary to concentrate attention on the low cost and high speed way of arriving at a system which provides a viable whole. Emphasis should be taken off the individual pieces, and concentrated on the workability and viability of the whole.

## **3. Rapid low budget development of the whole**

The uncertainty about the system lies essentially in the fact that until now, we have only been able to imagine methods of reaching the first test of the whole,

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which are expensive and time consuming. This creates a very high risk, and has led to a kind of chicken-egg problem. We need to test the whole. But it takes too much investment to get there. But how can we decide what to do, without testing the whole, etc.

The essential new idea, is therefore to find a rapid fire method of reaching a viable whole, which can give us confidence and experience, and the beginnings of demonstrated marketability, before large and risky further development costs.

The essential idea is to reduce financial risk inherent in the program.

### **4. Evolving system.**

The crux of the whole idea is that the pieces of furniture are constantly developing. The evolution of the pieces, similar to biological evolution, will benefit from rapid cycle of development - manufacturing - response - improvement. It means that we do not put the emphasis on having a perfect product, but on having an adequate and serviceable product, which is good enough for us all to stand behind it proudly.

It is to be expected that this will also produce a better spiritual attitude, since it is not so high flown, and will tend to produce more workable, and perhaps more inspired pieces, which are not constipated by perfection.

### **5. No design closure.**

The linear concept of design closure, should, for the purpose of this project, be abandoned— in favor of a more flexible, and more integrated approach in which rough closure is achieved on design, engineering and marketing all at the same time: and then the integrated version goes through cycles, getting better and getting better.

## **6. Key assumption — 12-14 items available within twelve months from start-up.**

The goal is to reach a point where 12-14 items can be available on a limited basis, on the market, within twelve months of re-starting the project, and that this limited system of 12-14 items already works as a whole..

## **7. Key assumption — Build on the fact that CES's designs include a great degree of technical resolution than HMI's usual design-development model.**

In many cases, CES designs are pre-engineered, and are essentially ready to produce, without further development. This feature of CES work, which has not been emphasized so far, is the key to the new model and new strategy.

## **8. Importance of production as something which is designed and developed from the first day.**

Choice of production plant. The size, character, location and process in the production is a key element in CES design project. We need an intimate small plant, capable of medium volume, semi-automated flexible production — batches of 3-300 or more, with flexible control of modifications within a batch.

Helicon might be useful, but location is poor. Northern California or Michigan production plant might be better. In any case choice, and development of plant should be integrated from the first day of start up.

## **9. Pavilions.**

HMI has begun developing "pavilions" — a new kind of sales organization, similar to a franchise, for dealers who commit to selling HMI products exclusively, with certain other permitted combinations. We propose that the Personal workplace will be sold under special pilot conditions, by pavilions who choose it. Pavilion owners will be chosen who are interested in devoting themselves to the PW system, and who will undertake a kind of partnership in making it work. Faster feedback from the sales. Faster reaction by PW development team.

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Both personal workplace and the pavilion concept are right now essentially at ground zero. We can modify personal workplace to adapt it and fit to this new sales technique, thus strengthening both the Pavilion sales technique, and the personal workplace program.

### **10. Task force**

We propose that development of the project be done by an interdepartmental special task force or pilot team consisting of CES, Rob Harvey and Gary Miller overseeing, 1 development project manager, 3 assistant engineers from Development engineering, 1 design staff member (possibly Marsha if possible), Larry from production plus 4 production engineers, and Pete Hoekstra plus 1 or 2 from marketing.

### **11. Minimal tooling.**

The idea is that all items will be manufactured by processes which require very low or near-zero special tooling. This has two important consequences.

1. Low capital cost of tooling.
2. Continuous evolution of designs, without penalty in capital cost.

### **12. Reduction of development cost for HMI.**

Because of small size of HMI team, high level of development by CES, and near-zero tooling, and flexible capacity of production plant, overall development cost is very low.

### **13. Reduction of “perfection” standard.**

In order to make this rapid cycle development work, the fundamental idea is that small volume of items are sent out, to market, without the enormous amount of pre-marketing, development, and sign-off which is more typical in HMI development. Instead, the assumption is that items are prepared to a level where they are beautiful, competent, and effective... but not in some imagined “final” state of perfection. This permits very rapid turn around, permits a small number of items to be manufactured, with continuous modification during production, as needed.

## **14. CES engineering and engineering time and cost.**

A crucial feature of the approach is that cost of development by HMI design and by HMI development engineering, is drastically reduced, since products can go almost direct from CES to production, within minimum work for checking cost reduction and improvement at HMI.

We propose the following cycle of development.

Step 1. CES will perform preliminary engineering on all items, with the target that they can be ready for production with 8-12 weeks of work on them. (compared with HMI norm of 12 months after designer sign-off.

Step 2. For each piece, CES supplies a complete *process* description of the finished design. This is an innovative kind of spec, unlike normal drawings or working drawings, and more like a production spec.

Step 3. Project manager plus HMI plus plant manager give cost feedback, with minor comments on production method.

Step 4. Meeting with CES, HMI, Production manager to resolve the issues and modify the process. It is anticipated that the changes in process will be minor.

Step 5. Production plant produces 1 model of the proposed piece, which is then checked and signed off by HMI, CES.

This is specifically to be made in *production plant*, not in engineering shop.

The general assumption is that the product will be approved for go-ahead, provided that the proposed cost is within target. *There will not be long hang-up of design review or design closure.*

## **15. Refinements to be made during evolution, not up front.**

It is crucial that all parties agree that because of the evolutionary approach, it **is not necessary to reach perfection in this product.** We might produce only 50 items, before making modifications in design, or process. Imperfections in efficiency, design, operational efficiency, cost etc, **can all be made during the process of evolution, and do not have to be attained the first time the product goes on line.**

## **16. Relaxed attitude to designs.**

It is critical to the success of this process, that design sign-off occurs at a very much less finicky level than usual. This permits very rapid development and testing of pieces, with low turnaround (for the development-manufacturing cycle). We may assume that pieces can be improved by rapid evolution, as experience teaches us improvements, and customer reaction.

## **17. Trial and error.**

The line of furniture will benefit from more rapid trial and error cycle. Analogy with biological evolution, which depends on the feedback cycle, and on intensive rapid fire trial and error.

## **18. Less intensive work on size variations.**

To support the concept of rapid design and evolution, the dimensional variants of any given item will be moved fairly rapidly, without final models. CES will make versions of the possible variants, but the understanding will be that evolution of these dimensional variants will occur over time, as part of the evolving process, and that we do not have to reach perfection on the size variants, before production starts.

## **19. Vienna workshops.**

The famous Vienna factory producing Thonet and other bent-wood furniture around 1890-1910, also had a more organic attitude. If you look carefully at pieces you find that each batch of furniture is slightly different. There is no such thing as an "Eames chair" cast in stone. Instead, each piece shows slight but continuous improvement and evolution. No two batches are quite the same. We expect that this will also happen with personal workplace, as a result of the strategy defined here. It is not something to be apologized for, but something to be proud of.

It may even be said, that under these circumstances the furniture is more truly art.



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It is also a more practical approach. All of this is made possible by near-zero tooling.

### **20. Definition of product as process.**

The idea that product is equivalent to process, and that each item is to be specified, not by a set of drawings, but by its production process is an essential ingredient of CES philosophy, and also an essential practical ingredient of this proposal.

The finished object, in its practical, and aesthetic, and spiritual dimension, is the end product of the actual processes which produce it. It is the actual process, the sequence of assembly, type of machining, type of finishing, type of sequence in assembly with respect to structural stability, and so on, which really determines the emotional impact of the object.

It is also necessary from a practical point of view. It means that the object, as conceived and specified, is already pre engineered, and that it is conceived as a made thing, with assembly and production, thought out in detail , in many cases to the finesses of processes which and dimensions which affect that last 1/64 of an inch, or quality of surface, quality of joint, feeling of the object and so on.

### **21. Some pavilions specially devoted to this concept.**

We believe that the pavilion concept may ultimately allow us to contemplate some pavilions which specialize in the personal workplace concept. These sales people will then bring a wholly new, and more intensive level of effort to the sales process, and by specializing in the personal workplace, will bring us intensive cooperation and feedback from customers, which can be built right back into the program.

### **22. Responsiveness to customer demand.**

Because of the evolutionary approach, and low tooling cost, it is possible to give an entirely new level of feedback to customer suggestions and complaints. We propose that we shall even encourage customer feedback, and explicitly

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tell customers that the evolutionary approach of the program, makes it possible for us to build in features which respond to their concerns, on a year by year basis.

### **23. Disclaimer or qualifier.**

In view of the evolutionary nature of the system, the sales material will make clear that there is some adventurous aspect to this program, and that we are looking for clients with an adventurous sense of the new. The idea is that the reward will be high, but that clients must recognize the program is in an evolutionary state.

### **24. Adventurous American public.**

To this end, sales and pavilion sales will be directed to seek out special clients who self select themselves, according to this attitude.

### **25. Sales brochures.**

As backup to the pavilion sales effort, the new line will need a fully developed and comprehensive line of glossy brochures, with the full force of HMI behind it. These glossy brochures will be supplemented with a new line of "desk-top" brochures that can be continuously modified without expensive setup costs, as per discussion with Pete Hoekstra.

### **26. On-going modification of design and engineering during production**

Since there is no design closure, and items will be continuously modified, even during production, we also need a part of the team that is attending to this on-going modification process. This will go continuously, after start-up. for the duration of the project.

### **27. Immediate start up of manufacturing with some items in production within 8 months**

At this moment we have six items that are ready for production. We propose an intensive effort on the manufacturing plant, which is aimed at immediate production of the items which can be delivered as they are now.

### **28. Plant itself as the immediate focus**

The location, conception, design and philosophy of the plant itself is a major ingredient in the whole scheme. CES expects to be deeply involved, with HMI, in defining, conceiving and designing and operating this plant.

The reality of the project, from the second start-up, will be focussed on the operation and character of the plant which actually produces the furniture.