

Questions?

- HW#8
 - Due this Thursday
- Check your grades!

The computer for the 21st Century

(Mark Weiser)

- Unnoticeable
 - Like writing, street signs...
- Disappear into the background
 - Like electric motors
 - Not attention demanding
- 3 scales
 - Taps (100s, inches scale)
 - Pads (10s, feet scale)
 - *Scrap computers*
 - Boards (few, yards scale)



Larger Electric Fans. Quiet running; ideal for home or office. Can be set upright or removed to wall, etc. like a bracket. We list two styles: straight and oscillating. The oscillating fan-motors move from side to side, throwing air in all directions of room. Each style operates on alternating current of 105 to 115 volts (found on common).

Cat. No.	Model	Type	Speed	Price
57P500	12"	Oscillating	17	\$10.95
57P501	12"	Oscillating	21	12.95
57P502	12"	Oscillating	25	14.95
57P503	12"	Oscillating	29	16.95
57P504	12"	Oscillating	33	18.95
57P505	12"	Oscillating	37	20.95
57P506	12"	Oscillating	41	22.95
57P507	12"	Oscillating	45	24.95
57P508	12"	Oscillating	49	26.95
57P509	12"	Oscillating	53	28.95
57P510	12"	Oscillating	57	30.95

Electric Radiator. Especially adapted for bath, room, office, and many other places where it is desirable to have a little heat without stuffing the furnace. Pulverized nickel mesh, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44, 46, 48, 50, 52, 54, 56, 58, 60, 62, 64, 66, 68, 70, 72, 74, 76, 78, 80, 82, 84, 86, 88, 90, 92, 94, 96, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116, 118, 120, 122, 124, 126, 128, 130, 132, 134, 136, 138, 140, 142, 144, 146, 148, 150, 152, 154, 156, 158, 160, 162, 164, 166, 168, 170, 172, 174, 176, 178, 180, 182, 184, 186, 188, 190, 192, 194, 196, 198, 200, 202, 204, 206, 208, 210, 212, 214, 216, 218, 220, 222, 224, 226, 228, 230, 232, 234, 236, 238, 240, 242, 244, 246, 248, 250, 252, 254, 256, 258, 260, 262, 264, 266, 268, 270, 272, 274, 276, 278, 280, 282, 284, 286, 288, 290, 292, 294, 296, 298, 300, 302, 304, 306, 308, 310, 312, 314, 316, 318, 320, 322, 324, 326, 328, 330, 332, 334, 336, 338, 340, 342, 344, 346, 348, 350, 352, 354, 356, 358, 360, 362, 364, 366, 368, 370, 372, 374, 376, 378, 380, 382, 384, 386, 388, 390, 392, 394, 396, 398, 400, 402, 404, 406, 408, 410, 412, 414, 416, 418, 420, 422, 424, 426, 428, 430, 432, 434, 436, 438, 440, 442, 444, 446, 448, 450, 452, 454, 456, 458, 460, 462, 464, 466, 468, 470, 472, 474, 476, 478, 480, 482, 484, 486, 488, 490, 492, 494, 496, 498, 500, 502, 504, 506, 508, 510, 512, 514, 516, 518, 520, 522, 524, 526, 528, 530, 532, 534, 536, 538, 540, 542, 544, 546, 548, 550, 552, 554, 556, 558, 560, 562, 564, 566, 568, 570, 572, 574, 576, 578, 580, 582, 584, 586, 588, 590, 592, 594, 596, 598, 600, 602, 604, 606, 608, 610, 612, 614, 616, 618, 620, 622, 624, 626, 628, 630, 632, 634, 636, 638, 640, 642, 644, 646, 648, 650, 652, 654, 656, 658, 660, 662, 664, 666, 668, 670, 672, 674, 676, 678, 680, 682, 684, 686, 688, 690, 692, 694, 696, 698, 700, 702, 704, 706, 708, 710, 712, 714, 716, 718, 720, 722, 724, 726, 728, 730, 732, 734, 736, 738, 740, 742, 744, 746, 748, 750, 752, 754, 756, 758, 760, 762, 764, 766, 768, 770, 772, 774, 776, 778, 780, 782, 784, 786, 788, 790, 792, 794, 796, 798, 800, 802, 804, 806, 808, 810, 812, 814, 816, 818, 820, 822, 824, 826, 828, 830, 832, 834, 836, 838, 840, 842, 844, 846, 848, 850, 852, 854, 856, 858, 860, 862, 864, 866, 868, 870, 872, 874, 876, 878, 880, 882, 884, 886, 888, 890, 892, 894, 896, 898, 900, 902, 904, 906, 908, 910, 912, 914, 916, 918, 920, 922, 924, 926, 928, 930, 932, 934, 936, 938, 940, 942, 944, 946, 948, 950, 952, 954, 956, 958, 960, 962, 964, 966, 968, 970, 972, 974, 976, 978, 980, 982, 984, 986, 988, 990, 992, 994, 996, 998, 1000.

Electric Radiator. Offers the many comforts and advantages which are to be found in other radiators listed on this page and is very similar to our No. 57P523, except the difference in general appearance. Nicely nickel plated and polished, and operates on the usual city current of 105 to 115 volts. Shipping wt., about 10 pounds.

No. 57P523 Price, complete, \$8.50

Round Electric Radiator. Then about the same amount of electricity as our Nos. 57P523 and 57P525 radiators. Has general appearance of a small oil stove. More of a tendency to throw the heat upward than the other radiators have and would be very satisfactory as a foot warmer. About 7 inches high and nearly finished. Usual city current of 105 to 115 volts. Complete with cord and plug. Shipping weight, about 5 pounds.

No. 57P525 Price, complete, \$5.95

Home Motor. This motor, as shown above, will operate a sewing machine. Fully attached makes sewing a pleasure. The most attachments shown on this page may be operated by this motor and will save the trouble of the same. Operates on usual city current of 105 to 115 volts. Shipping weight, about 5 pounds.

No. 57P524 Price, complete, \$8.75

Portable Vibrator. No. 57P5301 Neat, compact vibrator with three applicators, as shown. Very useful and satisfactory for home service. Shipping wt., about 3 1/2 pounds.

Price, complete, \$5.95

Vibrator Attachments for Home Motor. Include the special connection, three applicators and handle. Not necessary to buy a complete vibrator if you have the Home Motor. Shipping weight, about 1 1/2 pounds.

No. 57P5302 Price, complete, \$1.35

Household Mixer. Quickly attached to any lamp socket. You will find many uses for this handy device. Shipping weight, about 2 1/2 pounds.

No. 57P5303 Price, complete as shown, \$5.95

Beater Attachment. Whips cream and beats eggs, and many other uses will be found for these attachments when used in connection with the Home Motor. Parts include the stand, handle and the beater. Shipping weight, about 1 1/2 pounds.

No. 57P5304 Price, complete, \$1.30

Churn and Mixer Attachment. Used in connection with the Home Motor, makes a small churn and mixer for which you will find many uses. The attachments include the base, supports, mixer, handle and special cover for jar. Shipping weight, about 1 1/2 pounds.

No. 57P5305 Price, complete, \$1.30

Fan Attachment. Includes fan and guard which can be quickly attached to Home Motor, and will be a great comfort in hot weather. Shipping weight, about 1 1/2 pounds.

No. 57P5306 Price, complete, \$1.30

Buffer and Grinder Attachments. Will be found very useful in many ways around the house. Used in connection with Home Motor and include grinding and buffing wheels with buffer compound. Shipping weight, about 5 ounces.

No. 57P5307 Price, complete, \$1.35

Aids That Every Woman Appreciates

Make Sewing Easy With Sewing Machine Motor. Q UICKLY attached to your sewing machine without moving machine to any wall, it can be run out of door, through window, or placed on table, etc. The motor is very compact and the cord is very long. Recommended for use in general household or domestic work. Motor and attachment can be removed when machine is not to be used. Usual city current. Plug can be attached to any standard lamp socket. It has a 6 inch cord and 1/2 inch of cord, furnished.

No. 57P5308 Price, complete, \$11.50

Electric Sewing Machine Motor. Complete, for 30 to 35-watt incandescent lighting plant. Usual city current. Price, complete, \$11.50

New Combination Electric Fan and Lamp. Electric fan screws into any lamp socket, while lamp bulb can be placed in socket attached to fan; thus will give both breeze and light, or either alone. Fan is of steel, 6 inches in diameter, with lamp socket attached. For usual city current of 105 to 115 volts. Shipping wt., about 10 pounds.

No. 57P6202 Price, without lamp bulb, \$10.75

The invisible computer (Norman)

The computer for the 21st Century

(Mark Weiser)

- Key breakthroughs
 - Network technology
 - *High connectivity*
 - *High mobility*
 - *Good bandwidth*
 - Storage
 - *No need for delete*
 - Context aware
 - *Not AI*
 - *Privacy?*
 - Collaboration aware
 - *Easy to collaborate with them*
 - *Substrate for interactions*
 - Moving information around between appliance

Growing up

(From The Invisible Computer, Don Norman)

- Technology
- Customers
- Product development



1922

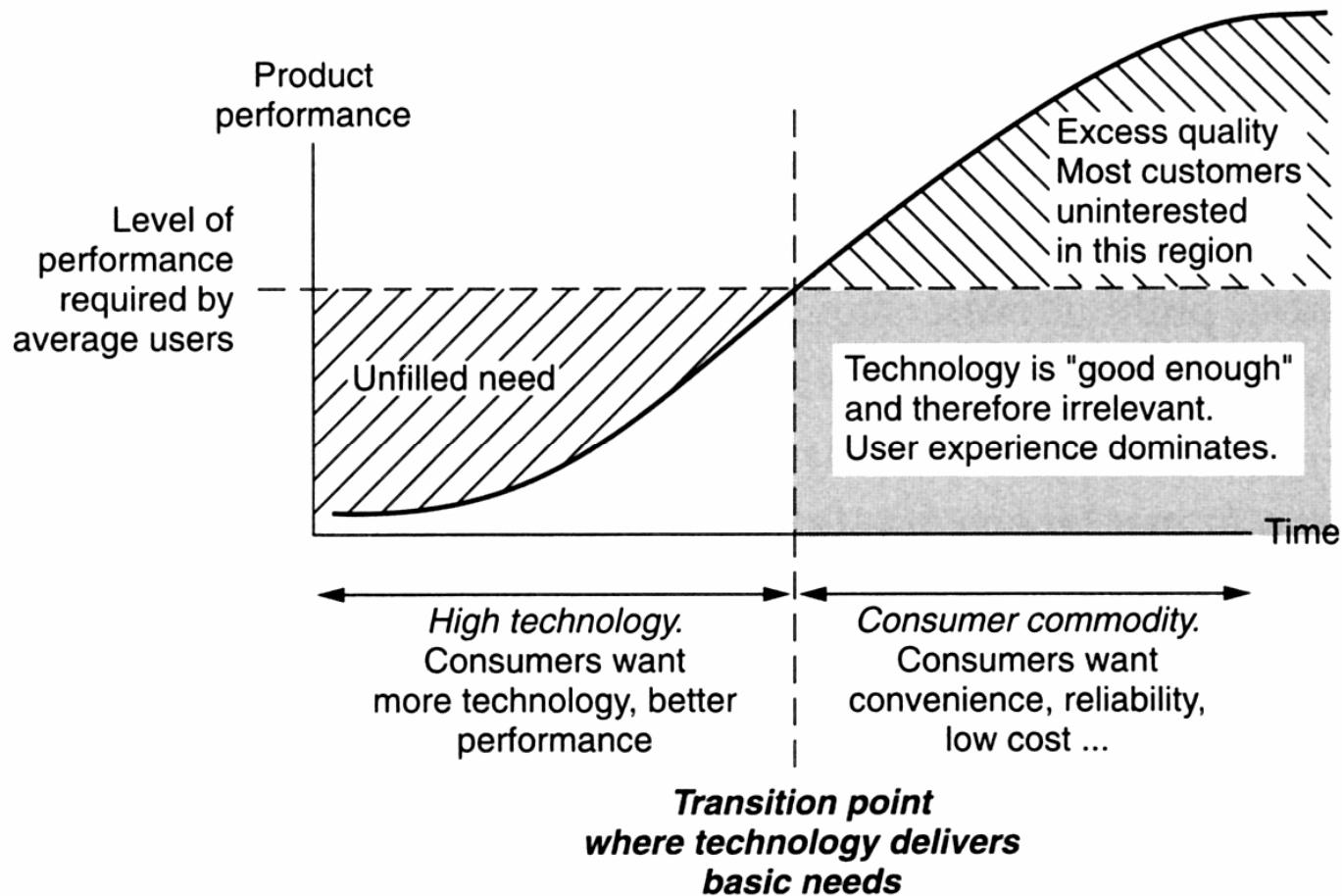


1945



199X

Technology: the need-satisfaction curve

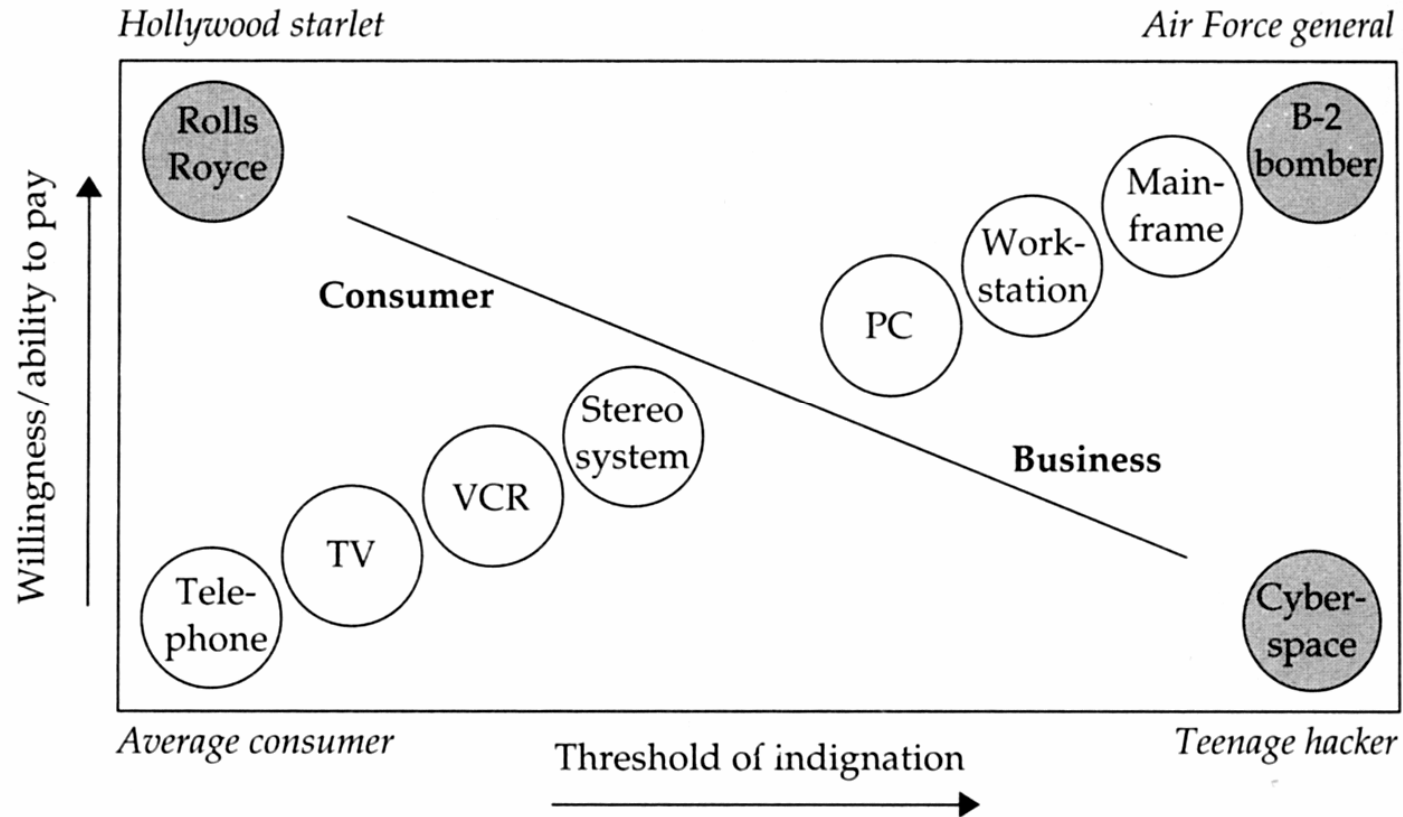


Examples

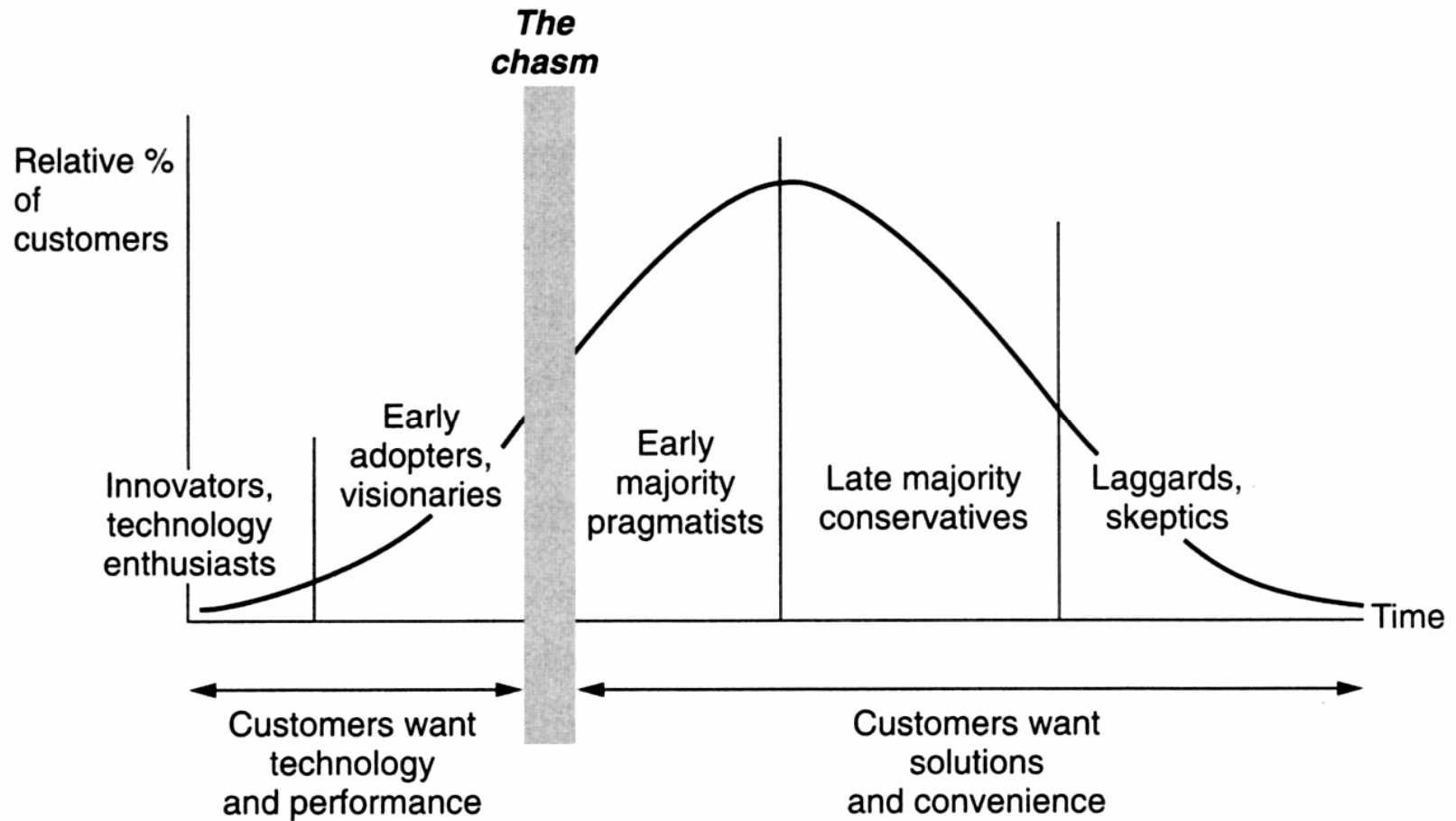
- Photography
 - Easy to process film (Kodak)
- Car
 - Affordable and easy to fix Ford-T (Ford)
- Radio
 - Extensive use of transistors (Sony)
- Personal computers
 - Easy “on your desk” printing (Apple Mac)
- Internet
 - Easy access from your home computer (AOL)

Price-indignation curve

(Paul Safo in Bringing design to software)



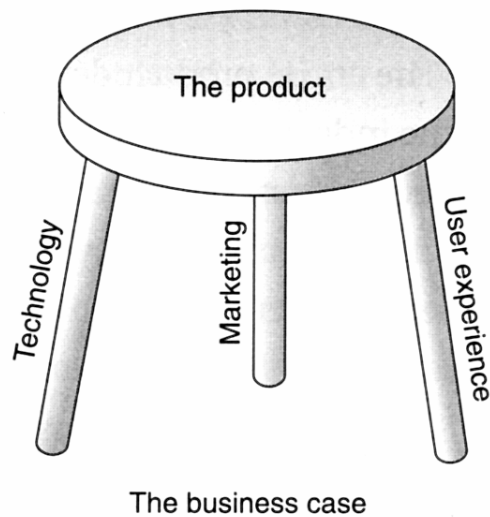
Customer: adopter categories



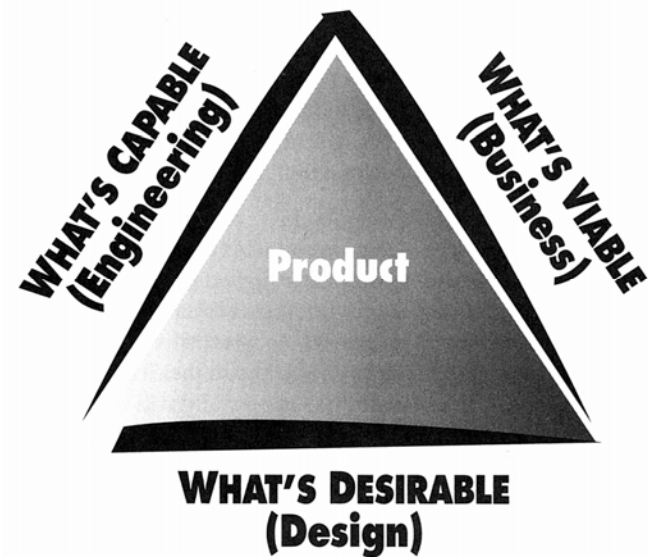
Examples

- Xerox Star
 - Targeted casual users, but lacked necessary performance
- Cellular phones
 - Almost at the laggards stage
- Personal computers?

The 3 legs of product development



The invisible computer, Don Norman



The inmates are running the asylum, Alan Cooper

Examples

(from *The inmates are running the Asylum*, Alan Cooper)

- Novell
 - NetWare dominated the market only while being the only game in town
- Microsoft
 - Good value, lot of features but how many loyal customers?
- Apple
 - Saved by its design of the user experience!