



Interior Systems, Inc.: The Decision to Adopt EVA

**Luiz Marcio Viana
Ricardo Coutinho
Thiago Athayde**

Introdução

O propósito deste caso é apresentar o modelo de avaliação de desempenho e pagamentos de incentivos desenvolvido pela consultoria **Stern Stewart**, denominado **Economic Value Added (EVA)**, aplicado a empresa **Interior Systems, Inc.**

O Problema

- ▶ As nossas vendas e lucro estão crescendo, mas os investidores dizem que para termos sucesso em uma oferta publica, nós precisamos obter melhores resultados, i.e., os acionistas esperam mais do que apenas lucro contábil.
- ▶ Podemos adotar outras formas de medição do resultado de uma empresa que considere outras medidas de desempenho além do crescimento das vendas e do lucro?
- ▶ A empresa precisa de um modelo de incentivo que promova maior motivação e alinhamento entre os gerentes e os objetivos dos acionistas.

Sobre a Interior Systems, Inc

- ▶ Empresa de *design* e fabricação de móveis de alta tecnologia para os mercados de aeronaves e de escritórios.
- ▶ A estratégia da empresa está alinhada com o desenvolvimento de produtos que ajudam os clientes a terem maior produtividade e lucratividade.

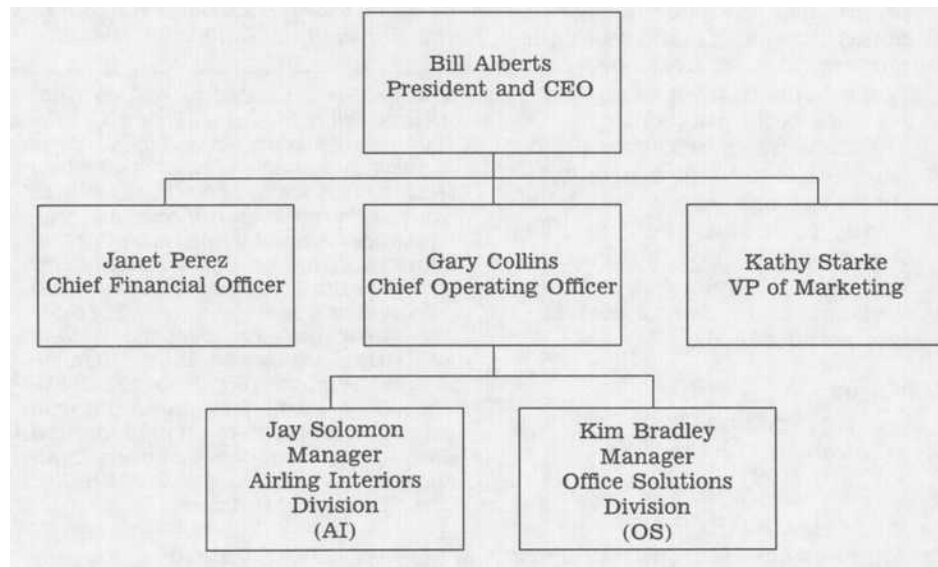
Fundador e Presidente: Bill Alberts

- ▶ Missão e objetivos são apenas palavras até você prover grandes incentivos que conduzem e gerenciam a ação.
- ▶ Nosso principal objetivo é criar valor fornecendo aos nossos clientes o que eles desejam antes deles pedirem por isso, fornecendo maior valor para os acionistas.
- ▶ Contratar pessoas talentosas, fornecendo a elas incentivos para que atuem como donos da empresa.

Sobre a Interior Systems, Inc

A empresa está organizada em duas divisões praticamente autônomas e com gestão descentralizada, mantendo apenas um pequeno grupo trabalhando no escritório central.

- Airline Interiors (AI)
- Office Solutions (OS)



Sobre a Interior Systems, Inc

Interior Systems, Inc.
Consolidated Financial Data
(all financial amounts in thousands of dollars)

	Notes	1991	1992	1993	1994	1995
Sales revenue		\$155,083	\$164,423	\$148,311	\$141,114	\$156,142
Variable operating expenses	1	42,216	46,370	37,660	38,101	42,663
Variable selling expenses	2	4,711	4,961	4,884	5,090	5,721
Contribution margin		\$108,156	\$113,092	\$105,767	\$ 97,923	\$107,758
Fixed expenses:						
Production costs	3	51,107	51,129	48,580	46,659	50,606
Research and development	4	7,141	7,647	6,869	6,461	8,193
Fixed selling & admin	5	33,316	36,255	35,138	29,484	29,870
Common (corporate) expenses	6	1,432	1,503	1,348	1,372	1,464
Interest expense	7	3,215	3,311	3,388	3,407	3,541
Net income before tax		\$ 11,945	\$ 13,247	\$ 10,444	\$ 10,540	\$ 14,084
Income taxes		3,584	3,974	3,133	3,162	4,225
Net income		\$ 8,361	\$ 9,273	\$ 7,311	\$ 7,378	\$ 9,859
Assets traceable to the divisions		\$ 95,712	\$102,412	\$110,297	\$118,239	\$127,816
Common assets		\$ 1,875	\$ 2,012	\$ 2,044	\$ 2,368	\$ 2,467
Corporate cost of capital	8	9.0%	9.0%	9.0%	9.0%	9.0%

Notes:

- 1 Includes direct material, direct labor and variable overhead.
- 2 Includes primarily sales commissions.
- 3 Includes rent, salaries, depreciation, property taxes and other fixed overhead.
- 4 A period expense.
- 5 Includes advertising, salaries, rent and other costs.
- 6 Includes interest, salaries and rent of corporate headquarters.
- 7 Interest expense is not traced to divisions.
- 8 The corporate cost of capital is the overall weighted opportunity cost of debt and equity capital.

Airline Interiors Division

- ▶ Airlines Interiors (AI) projeta e monta componentes para interior de aeronaves, que possibilitam ao fabricante ajustar a capacidade da aeronave com o conforto dos passageiros.
- ▶ Esta divisão possui um sofisticado algoritmo patenteado para dimensionamento e distribuição dos assentos na aeronave com base nas restrições de conforto e objetivos de capacidade.
- ▶ O sucesso desta divisão está na inovação dos projetos de configuração dos assentos que oferece grande conforto quando a aeronave não utiliza a sua capacidade máxima e oferece bom retorno obtido pelos assentos extras durante os momentos de alta demanda.
- ▶ O produto principal é uma cadeira que possui menor distância entre as fileiras, mas que consegue ser confortável pela maior dimensão do assento, com ajuste para a lombar e apoio para os pés, e que permite diferentes personalizações.
- ▶ Esta divisão investe de forma intensiva em P&D e pesquisa de mercado em um esforço contínuo para ficar a frente da concorrência.
- ▶ Devido a parceria com os fabricantes de aeronaves esta unidade consegue prever a sua produção em função das reservas efetuadas pelos clientes.

Airline Interiors Division

Interior Systems, Inc.
Airline Interiors Division—Selected Financial Data
(all financial amounts in thousands of dollars)

	Notes	1991	1992	1993	1994	1995
Sales revenue		\$114,850	\$120,665	\$103,290	\$92,459	\$105,665
Variable operating expenses	1	32,158	34,993	26,855	24,964	28,529
Variable selling expenses	2	2,297	2,292	2,273	2,219	2,642
Division contribution margin		\$ 80,395	\$ 83,380	\$ 74,162	\$ 65,276	\$ 74,494
Controllable fixed expenses						
Production costs	3	36,752	36,200	33,053	30,511	33,813
Research and development	4	6,940	7,384	6,644	6,218	7,688
Fixed selling & admin	5	24,889	26,609	24,461	18,698	19,477
Division fixed expenses		\$ 68,581	\$ 70,193	\$ 64,158	\$ 55,427	\$ 60,978
Controllable profits		\$ 11,814	\$ 13,187	\$ 10,004	\$ 9,849	\$ 13,516
Income taxes @ 30%		3,545	3,956	3,001	2,955	4,055
Division profit after taxes		\$ 8,269	\$ 9,231	\$ 7,003	\$ 6,894	\$ 9,461
Net division assets, beginning of year	6	\$ 63,857	\$ 68,327	\$ 73,588	\$ 78,887	\$ 85,276
Order backlog		\$196,000	\$171,000	\$198,000	\$202,000	\$205,000
Division cost of capital	7	9.80%	9.80%	9.80%	9.80%	9.80%

Notes:

- 1 Includes direct material, direct labor and variable overhead.
- 2 Includes primarily sales commissions.
- 3 Includes rent, salaries, depreciation, property taxes and other fixed overhead.
- 4 A period expense.
- 5 Includes advertising, salaries, rent and other costs.
- 6 Assets traceable to the Division, net of depreciation and amortization, as of the beginning of the year.
- 7 Division cost of capital rates are set higher than the overall corporate cost of capital to cover costs not allocated to divisions.

Office Solution Division

- ▶ No final de 1990, foi adquirida a empresa Office Solution, uma empresa que fabricava e vendia móveis para escritório, com o objetivo de atenuar os efeitos dos grandes períodos entre demandas por interior de aeronaves.
- ▶ Eles acreditavam que com a aquisição desta empresa eles poderiam ter novas idéias para produtos a partir da transferência de tecnologia da divisão de aeronaves.

E-chair

- ▶ Propósta: O desenvolvimento de uma cadeira para escritório baseada no modelo ergonômico desenvolvido pela divisão de aeronaves.
- ▶ O pessoal de venda identifica uma oportunidade na qual usuários das cadeiras no escritório desejariam viajar em aeronaves com poltronas igualmente confortáveis.

Office Solution Division

Interior Systems, Inc.
Office Solutions Division—Selected Financial Data
(all financial amounts in thousands of dollars)

	Notes	1991	1992	1993	1994	1995
Sales revenue		\$40,233	\$43,758	\$45,021	\$48,655	\$50,477
Variable operating expenses	1	10,058	11,377	10,805	13,137	14,134
Variable selling expenses	2	2,414	2,669	2,611	2,871	3,079
Division contribution margin		\$27,761	\$29,712	\$31,605	\$32,647	\$33,264
Controllable fixed expenses						
Production costs	3	14,355	14,929	15,527	16,148	16,793
Research and development	4	201	263	225	243	505
Fixed selling & admin	5	8,427	9,646	10,677	10,786	10,393
Division fixed expenses		\$22,983	\$24,838	\$26,429	\$27,177	\$27,691
Controllable profits		\$ 4,778	\$ 4,874	\$ 5,176	\$ 5,470	\$ 5,573
Income taxes @ 30%		1,433	1,462	1,553	1,641	1,672
Division profit after taxes		\$ 3,345	\$ 3,412	\$ 3,623	\$ 3,829	\$ 3,901
Net division assets, beginning of year	6	\$31,855	\$34,085	\$36,709	\$39,352	\$42,540
Division cost of capital	7	9.30%	9.30%	9.30%	9.30%	9.30%

Notes:

- 1 Includes direct material, direct labor and variable overhead.
- 2 Includes primarily sales commissions.
- 3 Includes rent, salaries, depreciation, property taxes and other fixed overhead.
- 4 A period expense.
- 5 Includes advertising, salaries, rent and other costs.
- 6 Assets traceable to the Division, net of depreciation and amortization, as of the beginning of the year.
- 7 Division cost of capital rates are set higher than the overall corporate cost of capital to cover costs not allocated to divisions.

E-chair

Interior Systems, Inc.
Office Solutions Division—Pro Forma Data for “E-Chair” Proposal
(all financial amounts in thousands of dollars)

	Notes	Estimated Annual Amount
Incremental sales revenue		\$8,000
Variable operating expenses	1	2,240
Variable selling expenses	2	800
Incremental contribution margin		<u>\$4,960</u>
Incremental fixed expenses		
Production costs	3	3,450
Depreciation	4	400
Research and development	5	100
Selling & administrative	6	500
Incremental pretax profits		<u>\$ 510</u>
Incremental income taxes at 30%		153
Incremental after-tax profits		<u>\$ 357</u>
Incremental investment in depreciable assets	7	\$4,000 or \$4,500
Incremental working capital	8	\$ 900

Notes:

- 1 Includes direct material, direct labor, variable overhead, variable selling and administrative.
- 2 Includes primarily sales commissions.
- 3 Includes rent, salaries, depreciation, property taxes and other fixed overhead.
- 4 Straight line; 10-year life; no salvage value.
- 5 A period expense.
- 6 Includes advertising, salaries, lease costs.
- 7 Either investment in depreciable assets is equally likely.
- 8 Working capital committed to the project is released at the end of the 10-year project life.

Resumo do Plano de Incentivo Existente

- ▶ Os objetivos anuais da empresa se baseiam na lucratividade e crescimento das vendas de cada divisão.
- ▶ Os executivos podem ganhar até 50% do salário base anual dependendo do nível, importância estratégica e desempenho.
- ▶ Diversos fatores contribuem para insatisfação com o plano existente:
 - A compensação financeira é em função do crescimento das vendas e lucros obtidos sem levar em consideração os investimentos realizados.
 - Esta forma de compensação produz na empresa um sentimento de que os novos investimentos são menos atrativos.

Investidores são enfáticos em afirmar que a empresa precisa criar valor para os acionistas e apresentam a Bill Alberts o livro “The Quest for Value”.

EVA

Conceitos sobre EVA

► O que é EVA???

- A criação de valor para os acionistas ocorre quando a empresa obtém uma taxa de retorno sobre os investimentos maior do que a taxa que os investidores conseguiriam ao investir em títulos de risco equivalente.

$$\text{EVA} = \text{NOPAT} - \text{CargaDeCapital}$$

$$= \text{NOPAT} - (\text{CapitalEmpregado} - \text{CustoDoCapital})$$

- NOPAT: Net operating profits after taxes (lucro operacional após impostos)
- Capital Empregado: Investimento inicial em ativos para produção
- Custo do Capital: Custo médio ponderado do capital.

$$\text{EVA} = \text{NOPAT} - (\text{WACC} \times \text{CI})$$

- ROI: Retorno sobre o capital
- WACC: Custo médio ponderado de capital
- CI: Capital Investido.

Conceitos sobre EVA

Interior Systems, Inc.
Description of Economic Value Added (EVA®)^a
Prepared by Janet Perez, CFO

This document describes the purpose, philosophy and mechanics of an EVA®-based incentive compensation system.

Purpose of EVA® Incentive Compensation

The objective underlying EVA® incentive compensation is to more closely link incentive awards to management decisions that add value for shareholders. In brief, the goal is to promote a corporate culture that rewards what our shareholders care most about—the value of their ownership in the Company.

What is EVA®?

Economic value for shareholders is created when a firm earns a rate of return on its investment in ISI that exceeds the current opportunity cost of capital. EVA® is calculated as follows:

$$\text{EVA}^{\circ} = \text{NOPAT} - \text{Capital Charge}$$

$$\text{Capital charge} = \text{Beginning-of-year Capital Employed} - \text{Cost of Capital}$$

where:

NOPAT = net operating profits after taxes. This is the equivalent of “division profit after tax” in exhibits 2 and 3 except that Stern Stewart recommends NOPAT be adjusted for “accounting distortions.” Examples of accounting distortions include:

- expensing R&D that benefits the future
- treating long-term noncancelable leases as operating leases

Note that NOPAT is *before* any deduction for interest expense since interest on debt is accounted for in the capital charge as discussed below.

Capital Employed = beginning-of-year assets (net of depreciation and amortization) adjusted for accounting distortions as discussed above.

Cost of Capital = a weighted average of the minimum return required by debt and equity holders, respectively, to compensate investors for the riskiness inherent in the Company’s operations. The AI division is somewhat riskier and requires a higher after-tax cost of capital than the OS division. These rates are provided in each division’s financial data (see exhibits 2 and 3). The

(Continued on the next page)

Conceitos sobre EVA

EXHIBIT 5 (Continued)

division after-tax cost of capital rates are set somewhat higher than the overall corporate rate to implicitly cover costs incurred at the corporate level that are not allocated to the divisions.

Positive (negative) EVA® is consistent with the Company building (destroying) shareholder value.

How might EVA® incentive compensation work?

The economic value added during a year can be calculated for each business unit.

Management of each unit can be directly compensated for their success in adding economic value.

The compensation formula could automatically adjust the baseline for calculating each year's bonus by taking into account the actual performance in the prior year. For example, each year's EVA® target could be the sum of the:

Average of the prior year's actual EVA® and target EVA®
plus
An expected improvement in EVA®.

Of course, many other compensation formulas are possible. We should probably start with something that is simple and easy to communicate. We can always revise it as everyone becomes more comfortable with the EVA® concept.

^a EVA® is a registered trademark of Stern Stewart and Company.

Conceitos sobre EVA – Distorções Contábeis

EXHIBIT 6
Interior Systems, Inc.
Potential Accounting "Distortions"
Prepared by Janet Perez, CFO

Potential Accounting Distortions:

- Jay Solomon (manager AI) believes that, despite financial accounting rules requiring R&D to be a period expense, R&D at AI benefits the future. Jay argues that the entire R&D budget is committed by the beginning of the year and should be treated as an asset at that point. He estimates that, on average, the benefit should last three years—two years beyond the end of the year the expenditure was incurred. AI's R&D expenditures (in thousands) for 1989 and 1990 were \$6,768 and \$6,842, respectively. There is general agreement among the management team that OS division R&D is less likely to benefit future periods. Thus, OS division R&D is treated as a period expense.
- The Company has substantial long-term noncancelable leases that are treated as operating leases under SFAS No. 13. For simplicity, assume each division has one major lease in this category and that each lease began at 1/1/90. Current rent expense (in thousands) associated with these leases is provided below:

Selected leases treated as operating leases for financial reporting, 1990-2004:

	AI	OS	ISI
Rent expense	\$850	\$380	\$1,230

If these leases were capitalized, it would affect assets and amortization expense traceable to each division as follows:

Pro forma amounts as of 1/1/90, as if selected operating leases were capitalized as that date and related annual lease amortization for the period, 1990-2004:

	AI	OS	ISI
Capitalized lease asset, net of amortization to date	\$8,125	\$3,600	\$11,725
Annual lease amortization expense	542	360	902

Lease amortization expense is estimated using the straight-line method. Interest expense related to these leases is not provided because interest expense is not allocated to divisions.

Engagement Letter

EXHIBIT 7
Interior Systems, Inc.
Engagement Letter

To: B.A. Consulting Teams
 From: Bill Alberts, President and CEO
 Re: Revised metric for Division Performance Evaluation and Senior Management Incentive Compensation
 Date: April 9, 1996

As discussed earlier, the purpose of this engagement is to have you investigate several issues surrounding our potential adoption of an EVA®-based scheme for division performance evaluation and senior management incentive compensation. We will be meeting soon with representatives of Stern Stewart, a consulting firm that has successfully marketed EVA®, to a number of leading corporations including Briggs & Stratton, Coca-Cola and Eli Lilly. These corporations seem happy with EVA® and feature it in their annual reports to shareholders. Since Stern Stewart has a vested interest in their product, we feel it prudent to seek independent advice to prepare for our meeting with their representatives. We would like you to provide us with an overview of the benefits and drawbacks of switching from our existing performance metric (division earnings) to one based on division EVA®. On balance, is the proposed change to EVA®-based performance evaluation a good idea? If yes, would it work equally well for each of our divisions (Airline Interiors and Office Solutions)? We seek your assistance in the following areas:

1. Calculate EVA® for each division and compare to our current reporting. Which do you prefer and why?
2. Holding other factors constant, how would implementation of EVA®-based incentive compensation likely affect our investment, financing and operating decisions? For example, if we adopt EVA®:

- a) What changes would likely occur in the general nature and number of projects adopted? Specifically, would you recommend that we accept or reject Office Solutions division's "E-chair" proposal?
 - b) What would likely be the effect on the level of cash dividends, share repurchases, debt and equity capital?
 - c) What would be the likely effect on the firm's utilization of existing assets?
3. Will an EVA®-based bonus plan reduce (or eliminate) dysfunctional incentives to maximize short-run performance at the cost of hurting long-run performance? If so, how?
 - 4a. Should we include EVA® numbers in our annual report?
 - 4b. Should we consider having our auditors attest to the numbers to increase credibility with shareholders?

If we decide to proceed with Stern Stewart's recommendations, you will likely be involved in our presentation to the Board of Directors. Thank you for your prompt attention.

Supplemental Questions:

5. Since ISI shares will likely be publicly traded within the next few years, should all of our incentive compensation at the division level and above ultimately be tied to the performance of the Company's stock price?
6. Evaluate the CFO and VP marketing opinions on what to do with ISI's excess cash.

Fim