



# Electronic Handbooks (EHBs)

## Business Plan

### PREPARED BY:

CONEY ISLAND INC.  
2939 WEST 29 TH STREET  
BROOKLYN, NY 11236-3030  
PHONE: (718) 999-9999  
FAX: (718) 999-8888

Email: [nfrankfurter@coneyisland.com](mailto:nfrankfurter@coneyisland.com)

Home Page: <http://coneyisland.com>

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## Project Summary

*Electronic Handbooks* (EHBs) are Internet-based tools that support the paperless documentation and management of complex distributed processes (e.g., Grants/Contracts Management). Tools include user interface, backend, requirements capture, and demonstration software. Processes are represented as "Internet-based plays" where "actors" communicate thru the Internet. For each role, EHBs guide actors thru their parts. Two applications of EHBs are: National Aeronautics and Space Administration's (NASA) Small Business Innovation Research (SBIR) Program, and Department of Justice's Bulletproof Vests Partnership (BVP) Program. EHBs, like plays, are developed in six stages: Outline or Playwriting, Example or Rehearsal, Implementation or Staging, Utilization or Performance, Revision or New Production, and Cross-Subprocess or Cross-Play Analysis. The objectives of EHBs are to facilitates 1) paperless documentation and management of complex distributed processes, 2) system development, 3) integration of independently developed subsystems, and 4) process and system improvement.

Some NASA paperless documentation and management applications of EHBs include SBIR Contracts, Grants, Contracts, Education Programs, Technologies, Datasets, Software, Documents, and Missions.

Some non-NASA Federal Government management applications of EHBs include Contracts, Grants, Education Programs, Technologies, Datasets, Software, Documents, and Missions. Some education management applications include: Public School Students and University Students. Some private sector management applications include Automobile Sales and Service, Health Episodes, Grants and Projects, Publishing Projects, Legal Cases, Policies, Credit Cards, Travel, Loans, and Construction Projects

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## 2 Identification and Significance of the Innovation

The proposed innovations are as follows:

(1) Electronic Handbooks (EHBs) are Internet-based tools that support the paperless documentation and management of complex distributed processes (e.g., Grants/Contracts Management). Tools include user interface, backend, requirements capture, and demonstration software.

(2) Processes are represented as "Internet-based plays" where "actors" communicate thru the Internet. For each role, EHBs guide actors thru their parts.

(3) EHBs, like plays, are developed in six stages: Outline or Playwriting, Example or Rehearsal, Implementation or Staging, Utilization or Performance, Revision or New Production, and Cross-Subprocess or Cross-Play Analysis.

The significance of the innovations is that EHBs will:

- (1) facilitate the movement from paper processes to paperless processes,
- (2) improve end users interactions within complex processes,
- (3) foster process, system, and product improvements, and
- (4) reduce costs in the overall administration of processes.

No commercial process management system offers all of these facilities and a few systems support only a small fraction of the solution. These innovations will dramatically increase the productivity of organizations involved in managing complex distributed processes. In order to build a process management system which coordinates many participants and populates and locates information from multiple repositories, it is necessary to have a common, uniform methodology for capturing the requirements for the entire process. Otherwise the data and process becomes too fragmented, complex and costly to develop, enhance, and maintain.

## 3 Technical Objectives

The technical objectives of EHBs are to:

- 1 Facilitate paperless documentation and management of complex distributed processes.
- 2 Facilitate system development:
  - o requirements capture,
  - o system design,
  - o implementation,
  - o multi-developer coordination,
  - o software distribution,
  - o end-user learning,
  - o system documentation,
  - o system revisions, and

- system reuse for similar processes.
- 3 Facilitate integration of independently developed subsystems.
- 4 Facilitate process and system improvement.

## 4 Work Plan

### 4.1 Technical Approach

In order to achieve the four objectives described in Part 3 of this proposal, Coney Island, Inc., has divided the project into four major areas:

- **EHBs User Interface Tools.** These are software tools that facilitate the building of the EHBs user interface for different EHBs applications.
- **EHBs Backend Tools.** These are software tools that facilitate the building of the EHBs database and database interfaces for different EHBs applications.
- **EHBs Requirements Capture Tools.** These are software tools that facilitate the overall building of EHBs applications.
- **EHBs Demonstration Tools.** These are software tools that facilitate the demonstration and/or marketing of EHBs.

### 4.2 Task Descriptions

During Phase I, our effort will focus on the design of the four types of tools.

#### Task 1. Design EHBs User Interface Tools

EHBs User Interface Tools are software than facilitate the building of the EHBs user interface for different EHBs applications. The key interface is the User Electronic Handbook (user EHB) for that role. For example, Figure 1 shows a sample user EHB for firms that are submitting applications to the NASA SBIR program.

Each user has an account and password and the EHB keeps track off all of the user's information that he/she needs to know to do his/her subprocess. For example, in the case of a user EHB for firms submitting SBIR proposals, the EHB keeps track of all the incomplete and completed proposals that the user is submitting. In the case of a user EHB for SBIR proposal reviewers, the EHB keeps track of all of the incomplete and complete proposal reviews that the reviewer is assigned.

Each user EHB is architected so that the user is prompted at each stage of the subprocess. This is done to minimize the learning effort involved in using the EHB. It also allows the user to come back after a long period of time and easily return to complete and/or restart the subprocesses.

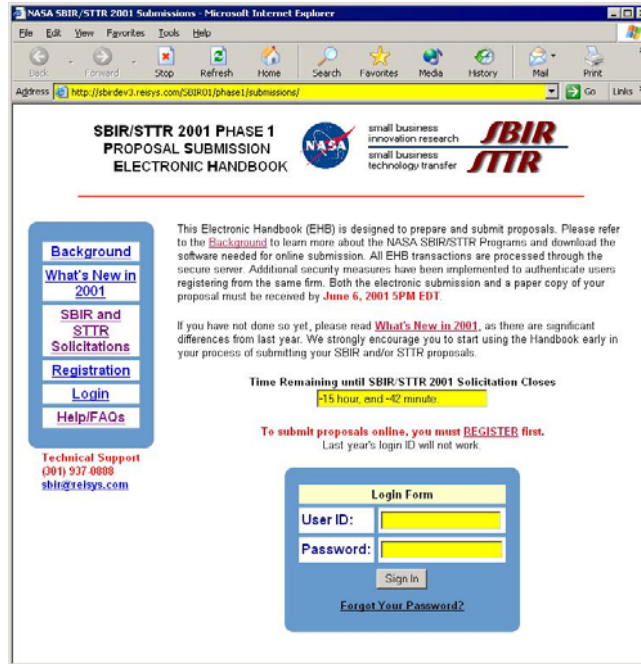


Figure 1. User EHB for firms that are submitting applications to the NASA SBIR program

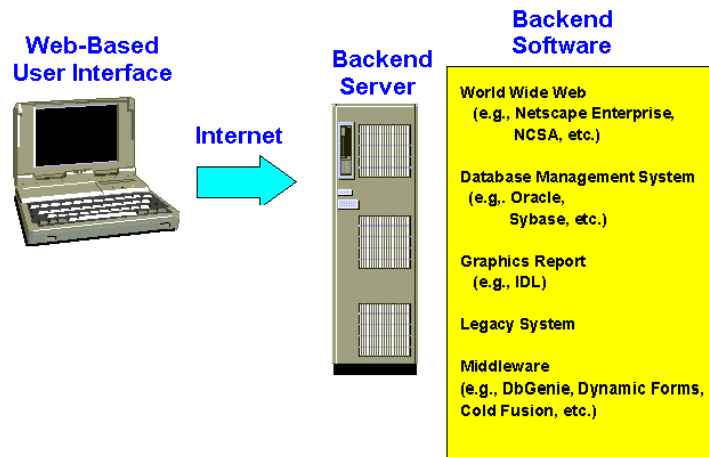


Figure 2. EHB system architecture.

## **Task 2. Design EHBs Backend Tools**

EHBs Backend Tools are software that facilitate the building of the EHBs database interfaces for different EHBs applications. Figure 2 shows a diagram for the EHBs system architecture and shows some of the backend tools that are used to implement EHBs. The set of EHBs Backend Tools includes:

*World Wide Web Servers* are used to store and maintain all of the web pages used in the implementation of EHBs. These are used by the EHBs to transfer the subparts of the EHBs between the users and the other backend tools. Some examples of World Wide Web Servers are Netscape, Apache, Microsoft IS Server, etc.

*Database Management System Servers* are used to store and maintain all of the databases used in the implementation of EHBs. These are used to main the record type data that the user EHBs will update and retrieve. Some examples of Database Management System Servers are Oracle, Sybase, Access, Informix, SQL Server, etc.

*Graphics Report Servers* are used to display reports generated from the data in databases used in the implementation of EHBs. These are used to generate graphic reports in the user EHBs with the data from the Database Management System Servers. Some examples of Graphics Report Servers are IDL, Power Point, MS Access, MS Excel, etc.

*Legacy Systems* are pre-existing or independently built subsystems that can sit “underneath” the user EHBs interfaces. Such legacy systems can be used as database and/or graphic report servers for existing pre-data. Some examples of Legacy Systems are accounting systems, payroll systems, etc.

*Middleware Systems* are used to store and maintain all of the databases used in the implementation of EHBs. These are used to generate tabular reports in the user EHBs with the data from the Database Management System Servers. These are also used to generate the User EHB pages themselves. Some examples of Middleware systems are DBGenie, Cold Fusion, Java Server Pages, Active Server Pages, etc.

## **Task 3. Design EHBs Requirements Capture Tools**

Requirements Capture Tool (RCTs) are web pages that define and document subprocesses of a subprocess. RCTs facilitate the overall system development process: requirements capture, system design, implementation, multi-developer coordination, software distribution, end-user learning, system documentation, system revisions, and system reuse for similar processes. Figure 3 shows an example of an RCT which is used to build the NASA SBIR Contract Administration and Closeout Subprocess. Figure 4 shows an example of a matrix of RCTs which correspond to all of the RCTs for the entire NASA SBIR processes.

The set of web pages in an RCT include:

*Binders* illustrates all of the data collected during the execution of the subprocess. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, there would be links to contract folders and deliverables, contract award file library, deliverables library, and user profiles.

*Process* illustrates the “play” which defines the subprocess and tells us who produces the parts of the binder and when they produce them. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, the subprocess would be a play with the following “acts”: 1)

Preliminaries, 2) Deliverables, 3) Advisors, 4) Modifications, 5) Closeouts and 6) Analysis. Each act would be a subplay which defines who does what and in what order.

*Example User EHBs* illustrate for each role exactly what the role does in the subprocess. *Implemented User EHBs* are the user interfaces in the subprocess for each role. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, some User EHBs include: Contract Specialist, Principal Investigator/Awardee Official, Contracting Officer Technical Representative (COTR), Advisor, Field Center Program Manager, etc.

*Example Home Pages* illustrate how the outside user or customer comes into the process and gets their User EHB. *Implemented Home Pages* are used as a public interface for its customers. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, the Principal Investigator/Awardee Official would find a link to their user EHB in which they would be able to submit their deliverables and/or approve contract modifications.

*Example Files* illustrate the internal file structures for the files used to illustrate the Example user EHBs. *Implemented Files* define the file structure of all of the implementation of the EHBs. In both cases, the file structures are divided by roles. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, some User EHBs files include: Contract Specialist, Principal Investigator/Awardee Official, Contracting Officer Technical Representative (COTR), Advisor, Field Center Program Manager, etc.

*Suggestions* provide a vehicle to collect comments and suggestions to improve the subprocess defined in the RCT. For example, in the RCT corresponding to NASA SBIR Contract Administration and Closeout Subprocess, the Suggestions link could result in an e-mail message to the system developer or an entry into a corresponding suggestions database used by the system developer.

#### **Task 4. Design EHBs Demonstration Tools**

EHBs/RCTs Development Process, EHBs/RCTs Development Roles, and Quiz). Other items in the EHBs Demonstration Tool are customer specific (e.g., What are EHBs?, An Example EHB, Objectives, Requirements Capture Tools (RCTs), Multi-Year Areas RCTs/EHBs, Multi-Year Subprocesses RCTs/EHBs Development Matrix, Benefits, and Documents.)

EHBs Demonstration Tools facilitate the marketing of EHBs. Each EHBs Demonstration Tool is tailored to a particular customer so that the customer sees exactly how EHBs can be applied directly to his/her specific

processes. Figure 5 shows an example of an EHBs demonstration which was used to market EHBs technology to the Health Services Research Administration (HRSA) of the Department of Human Services (HHS). Some items in the EHBs Demonstration Tool are generic (e.g., Other Applications, Architecture,

### **4.3 Meeting the Technical Objectives**

EHBs meets the technical objectives outlined in Part 3 as follows:

1. EHBs facilitate paperless documentation and management of complex distributed processes. See Figure 4.
2. EHBs facilitate system development:



- Requirements Capture Tools (RCTs) reduce requirements capture costs, See Figure 3.
  - RCTs reduce system design costs, See Figure 3. Once the examples are generated in the RCT, much of the design is completed.
  - RCTs + Middleware (e.g., DBGenie, Cold Fusion, etc.) reduce implementation costs, See Figure 3. Once the examples are generated, implementation follows by replacing the example with SQL calls to the database.
  - RCTs reduce multi-developer coordination costs, See Figure 4. Each developer is given their own RCT to design and implement.
  - Web browsers reduce software distribution costs, See Figure 1. EHBs are distributed via the World Wide Web.
  - User EHBs reduce end-user learning costs, See Figure 1. EHBs are built so that the user is led to thru the subprocess and does not need training.
  - RCTs + Middleware reduce documentation costs, See Figure 3. Each RCT represents a complete set of documentation for that subprocess.
  - RCTs + Middleware reduce revision costs, See Figure 3. By changing the examples in the RCT and presenting them to the owner, the revision can be validated. When the examples are approved, the implementation can be correspondingly adjusted.
  - RCTs + Middleware facilitate system reuse for similar processes. See Figure 4. Different RCT subprocesses can be copied and reused for similar subprocesses.
3. EHBs and RCTs facilitate integration of independently developed subsystems, See Figure 4. The matrix of subprocess lets one look at all existing subprocesses. This will lead to integration of user interfaces followed by integration of backends.
4. EHBs facilitate process and system improvement by providing "multiple points of view", e.g.,
- Multiple User Perspectives. By looking at a subprocess thru different user roles (e.g, different user EHBs), one captures more requirements.
  - Multiple Subprocesses. By comparing similar subprocesses (e.g., SBIR Phase I and II proposal submissions), one can't help but discover efficiencies.
  - Multiple Subprocess Data. By examining an entire process thru the eyes of a single role or user type (e.g., the SBIR firm through the entire SBIR process), one creates simplification with regard to the user.
  - Multiple Applications. By examining similar applications over the same organization (e.g, grants over different programs in the same agency), one can't help but see commonalities.
  - Multiple Organizations. By examining grants over multiple Federal Agencies, one can't help but see commonalities.

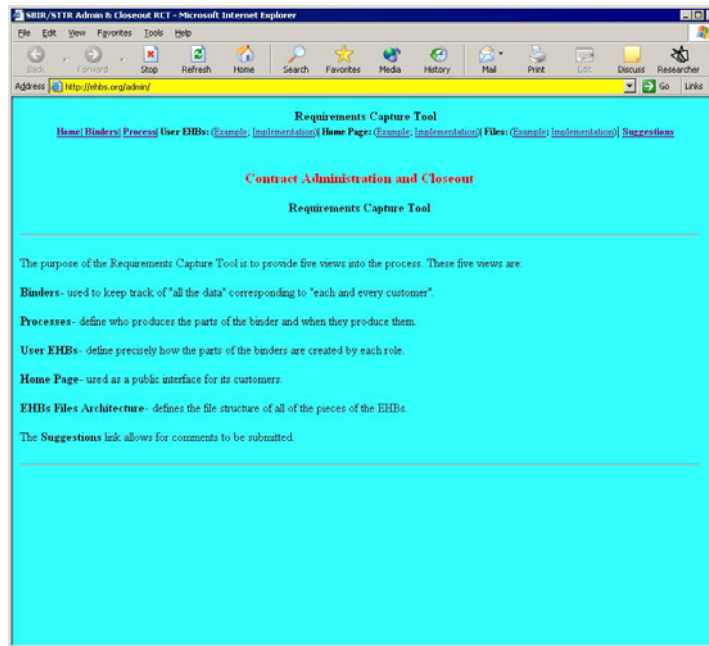


Figure 3. NASA SBIR Contract Administration and Closeout Process RCT.

The screenshot shows a Microsoft Internet Explorer window titled 'SBIR RCTs/EHBs Subprocesses Matrix - Microsoft Internet Explorer'. The address bar shows 'http://ehbs.org/sbir/subprocesses.htm'. The main content area displays a table titled 'NASA's SBIR RCTs/EHBs Subprocesses Matrix'. The table has 11 columns representing subprocesses and 5 rows representing years from 1998 to 2002. Each cell in the table contains text indicating the status of the subprocess for that year, such as 'SBIR/STTR: Example' or 'SBIR/STTR: Utilization'.

	I Solicitation Development	I Submission	I Review & Selection	I Negotiation & Award	I Administration & Closeout	II Submission	II Review & Selection	II Negotiation & Award	II Administration & Closeout	III Award	Commercialization & Post-Award
2002	SBIR/STTR: Implementation	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Outline	SBIR/STTR: Outline
2001	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Outline	SBIR/STTR: Outline
2000	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Utilization	SBIR/STTR: Outline	SBIR/STTR: Outline
1999	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Outline	SBIR/STTR: Outline
1998	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Example	SBIR/STTR: Utilization	SBIR/STTR: Utilization	SBIR/STTR: Example	SBIR/STTR: Outline	SBIR/STTR: Outline

Figure 4. NASA SBIR Development Matrix of RCTs.

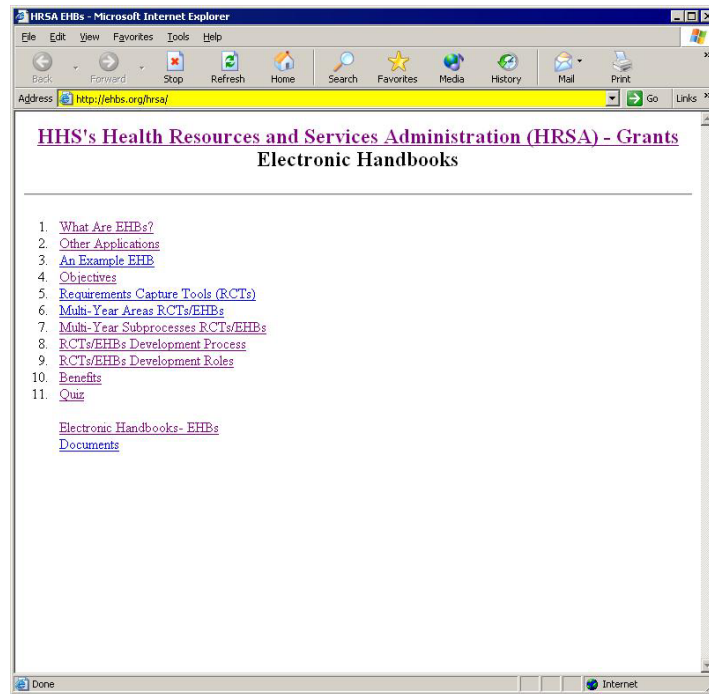


Figure 5. Health Services Research Administration (HRSA) EHBs Demonstration.

#### 4.4 Task by Labor Categories and Schedules

Table 6. provides our projected allocation by labor category by task.

Table 7. provides our projected schedule by task.

### Part 5 Potential Applications

#### 5.1 Potential NASA Applications

There are a number of potential NASA applications for EHBs-based management:

**Contracts.** Here we manage NASA contracts from beginning to end. The basic subprocesses are 1) Solicitation Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Contract Negotiations and Issuance, 5) Contract Administration, 6) Contract Closeout, and 7) Post-Closeout Processes.

**Grants.** Here we manage NASA grants from beginning to end. The basic subprocesses are 1) Solicitation Development and Outreach, 2) Application/Proposal Submission, 3) Review and Selection, 4) Grant Negotiations and Issuance, 5) Grant Administration, 6) Grant Closeout, and 7) Post-Closeout Processes.

TASK	DESCRIPTION	PI	PM	Lead TE	2nd TE	Lead SE	2nd SE
1	Design EHBs User Interface Tools	160	0	4	120	40	40
2	Design EHBs Backend Tools	160	0	16	240	160	160
3	Design EHBs Requirements Capture Tools	240	0	8	40	160	160
4	Design EHBs Demonstration Tools	80	80	30	120	1000	1000

Where:

PI = Principal Investigator  
 PM = Program Manager  
 TE = Technical Expert  
 SE = Software Engineer

Figure 6. Tasks by labor category.

	Jun	Jul	Aug	Sep	Oct	Nov
Design EHBs User Interface Tools	*	*	*	*	*	
Design EHBs Backend Tools	*	*	*	*	*	
Design EHBs Requirements Capture Tools			*	*	*	
Design EHBs Demonstration Tools			*	*	*	

where \* = Specification and or design.  
 \* = Documentation  
 \* = Software Development  
 \* = Software Testing

Figure 7. Tasks schedule.

**Education Programs.** Here we manage NASA education programs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Education Program Proposal Submission, 3) Review and Selection, 4) Education Program Negotiations and Issuance, 5) Education Program Administration, 6) Education Program Closeout, and 7) Post-Closeout Processes.

**Technologies.** Here we manage NASA technology programs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Technology Negotiations and Issuance, 5) Technology Administration, 6) Technology Closeout, and 7) Post-Closeout Processes.

**Datasets.** Here we manage NASA data programs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Dataset Negotiations and Issuance, 5) Dataset Administration, 6) Dataset Closeout, and 7) Post-Closeout Processes.

**Software.** Here we manage NASA software programs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Software Negotiations and Issuance, 5) Software Administration, 6) Software Closeout, and 7) Post-Closeout Processes.

**Documents.** Here we manage NASA document programs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Document Negotiations and Issuance, 5) Document Administration, 6) Document Closeout, and 7) Post-Closeout Processes.

**Missions.** Here we manage NASA missions from beginning to end. The basic subprocesses are 1) Program Management Process and Functional (Program Formulation, Program Approval, Program Implementation, Program Evaluation), 2) Project Management Process and Functional (Project Formulation, Project Approval, Project Implementation, Project Evaluation), and 3) Program/Project Management Systems Requirements (Resources Management, Risk Management, Performance Management, Acquisition Management, Safety and Mission Success, and Environmental Management, Program/Project Management Development)

## 5.2 Potential Non-NASA Commercial Applications

There are a number of potential non-NASA commercial applications for EHBs-based management:

**Contracts.** Here we manage contracts from beginning to end. The basic subprocesses are 1) Solicitation Development and Outreach, 2) Proposal Submission, 3) Review and Selection, 4) Contract Negotiations and Issuance, 5) Contract Administration, 6) Contract Closeout, and 7) Post-Closeout Processes.

**Grants.** Here we manage grants from beginning to end. The basic subprocesses are 1) Solicitation Development and Outreach, 2) Application Submission, 3) Review and Selection, 4) Grant Negotiations and Issuance, 5) Grant Administration, 6) Grant Closeout, and 7) Post-Closeout Processes.

**Property Disposal.** Here we manage property from beginning to end. The basic subprocesses are 1) Area Development, 2) Proposal Submission, 3) Review and Selection, 4) Property Negotiations and Issuance, 5) Property Administration, 6) Property Closeout, and 7) Post-Closeout Processes.

**Research, Analysis, and Information Projects-** Here we manage research projects from beginning to end. The basic subprocesses are 1) Area Development, 2) Proposal Submission, 3) Review and Selection, 4) Project Negotiations, 5) Project Administration, 6) Project Closeout, and 7) Post-Closeout Processes.

**Education.** Here we manage student enrollments from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Applications, 3) Review and Selection, 4) Counseling, 5) Enrollment, 6) Graduation, and 7) Post- Graduation Processes.

**Automobile Sales and Service.** Here we manage automobiles from beginning to end. The basic subprocesses are 1) Dealer Development and Marketing, 2) Submission, 3) Review and Demonstration, 4) Sales, 5) Servicing, 6) Closeout, and 7) Post-Closeout Processes.

**Health Episodes.** Here we manage patient health episodes from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Application Submission, 3) Review and Diagnosis, 4) Treatment Determination, 5) Treatment, 6) Treatment Closeout, and 7) Post-Treatment Processes.

**Publishing Projects.** Here we manage publishing projects from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Project Proposal Submission, 3) Review and Selection, 4) Project Negotiations, 5) Project Administration, 6) Project Closeout, and 7) Post-Closeout Processes.

**Legal Cases.** Here we manage grants from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Case Submission, 3) Review and Selection, 4) Case Negotiations and Issuance, 5) Case Administration, 6) Case Closeout, and 7) Post-Closeout Processes.

**Insurance Policies.** Here we manage legal cases from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Policy Application Submission, 3) Policy Review and Selection, 4) Policy Negotiations, 5) Policy Administration, 6) Policy Closeout, and 7) Post-Closeout Processes.

**Credit Cards.** Here we manage credit cards from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Card Application Submission, 3) Review and Selection, 4) Card Negotiations, 5) Card Administration, 6) Card Closeout, and 7) Post-Closeout Processes.

**Travel.** Here we manage travel from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Trip Submission, 3) Trip Review and Selection, 4) Trip Negotiations, 5) Trip Administration, 6) Trip Closeout, and 7) Post-Closeout Processes.

**Loans.** Here we manage loans from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Loan Application Submission, 3) Review and Selection, 4) Loan Negotiations and Issuance, 5) Loan Administration, 6) Loan Closeout, and 7) Post-Closeout Processes.

**Construction Projects.** Here we manage construction projects from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Application/Proposal Submission, 3) Review and Selection, 4) Project Negotiations and Issuance, 5) Project Administration, 6) Project Closeout, and 7) Post-Closeout Processes.

**EHBs Building.** Here we manage EHBs from beginning to end. The basic subprocesses are 1) Area Development and Outreach, 2) Submission, 3) Review and Demonstration, 4) Contract Negotiations and Issuance, 5) Building and Maintaining EHBs, 6) Contract Closeout, and 7) Post-Closeout Processes.

## **6 Contacts**

### **6.1 Key Contractor Participants**

Mr. Nathan Frankfurter, Principal Investigator, President, Coney Island, Inc. Coney Island, Inc. (718) 286 -7873

Mr. Pierre Fries, Technical Expert., Executive Vice President, Coney Island, Inc. (718) 286-8457.

Dr. Potato Kanish, Technical Expert, Coney Island Inc. (718) 286-4444.

Mrs. Anna Banana, Contracts Official, Coney Island Inc. (718) 286-4444.

Ms. Cornontha Cobb, Software Engineer, Software Engineer Coney Island Inc. (718) 286-8547.

Ms. Softshell (Shelly) Krabbs, Software Engineer, Software Engineer, Coney Island Inc. (718) 286-4444

Dr. Sidney Hamburger, Technical Expert., Professor NYU (718) 286-8547

Mr. Van Ella Custard, Software Test Engineer., Research Assistant, NYU (718) 286-8547

### **6.2 Key NASA Participants**

Jane Black, COTR GSFC (301) 286 -7873

Robin Smith, Contract Specialist GSFC (301) 286-8457

Ian Green, GSFC SBIR Program Representative, GSFC TCO (301) 286-4444.

### **6.3 NASA and Non-NASA Advisors**

Jane Black, Boeing Corporation (301) 286 -7873

Roger Smith, Boeing Corporation (301) 286-8457.

Ian Green, Space Science Corporation (301) 286-4444.

Brett Jones, Space Science Corporation (SSTO) (301) 286-8547.

Sam Blue University of Maryland Business Corporation (301) 286-4444

Frank Nelson International Business Machines Corporation (301) 286-8547

## **7 Business Plan**

Coney Island, Inc.'s will demonstrate our total commitment to the development and marketing of a complex distributed process management system product. This effort is to form the basis of the paperless complex distributed process management product Coney Island, Inc., brings to market. Coney Island, Inc., plans to either finance its initial operation with venture capital, or if no venture capital is obtained, the principals are committed to self finance the venture.

## 7.1 Product or Service Commercial Feasibility

In this section, we discuss the planned commercial product or service to be developed from the SBIR/STTR effort, including the unique competitive advantage, and the remaining technical hurdles and how they will be addressed.

Coney Island Inc.'s planned commercial product and/or service developed from this SBIR effort is the building and maintaining of Electronic Handbooks (EHBs) for customers having complex distributed processes.

Coney Island Inc.'s unique competitive advantage is that they invented the EHBs concept, the process of building EHBs (i.e., Requirements Capture Tools- RCTs and RCTs Matrices), and the process of marketing EHBs (i.e., Demonstrations).

Coney Island Inc.'s remaining technical hurdles are development of tools that will facilitate the building of interfaces between EHBs and arbitrary legacy systems. Coney Island Inc. will deal with these remaining technical hurdles by accumulating a large library of legacy building tools.

## 7.2 Market Feasibility

In this section, we describe the target market of the commercial product or service, the potential market size (government and/or non-government), the offeror's estimated market share after first year of sales and after 5 years, and, competition from similar and alternative technologies and/or competing domestic or foreign entities.

Coney Island Inc.'s target markets of the commercial product or service is divided into several areas, namely, NASA (i.e., Contracts, Grants, Contracts, Education Programs, Technologies, Datasets, Software, Documents, and Missions), Federal Government (i.e., Grants, Education Programs, Technologies, Datasets, Software, Documents, and Missions), Education (i.e., Public School and University) and the Private Sector (i.e., Sales and Service, Health Episodes, Grants and Projects, Publishing Projects, Legal Cases, Policies, Credit Cards, Travel, Loans, and Construction Projects)

Coney Island Inc.'s estimates of the potential market sizes (government and/or non-government), are as follows- NASA (over 230 Customers), Federal Government (over 500 Customers), Education (over 500 Customers) and the Private Sector (over 500 Customers).

Coney Island Inc.'s estimates of the market shares after first year of sales and after 5 years are as follows- NASA (first year 3%, after 5 years 12%), Federal Government (first year 8%, after 5 years 22%), Education (first year 23%, after 5 years 32%) and the Private Sector (first year 5%, after 5 years 12%)

Coney Island Inc.'s main competition after the first year will come from several companies-

- Hot Pretzel Software Inc,
- Hot Doggie System
- Cole Slaw & Mustard, Limited

Coney Island Inc.'s main competition after five years will come from several companies-

- Hot Pretzel Software Inc,
- Hot Doggie System
- Orange Drinks Developers
- Cole Slaw & Mustard, Limited
- Tommy Knish Developers
- Cheese Pizza Software



### **7.3 Strategic Relevance to Offeror**

In this section, we describe the role the commercial product or service has in the company's current business plan and in its strategic planning for the next 5 years.

Coney Island Inc.'s role for the commercial product or service has in the company's current business plan business is that EHBs will encompass roughly 45% of the firm's business. Coney Island Inc.'s role in its strategic planning for the next 5 years is that it will encompass roughly 79% of the firm's business.

### **7.4 Key Management, Technical Personnel and Organizational Structure**

In this section, we describe (a) the skills and experiences of key management and technical personnel in bringing innovative technology to the market, (b) current organizational structure, and (c) plans and timelines for obtaining needed business development expertise and other necessary personnel.

Coney Island Inc.'s has the skills and experiences of key management and technical personnel in bringing innovative technology to the market. See Figure 8. Mr. Frankfurter and Mr. Fries began designing a paperless complex distributed process management system in the second quarter of 1996. Mr. Frankfurter selected Mr. Fries because his former company, Hot Dog Systems, Inc.(HDS), had successfully employed Mr. Fries numerous time as a Senior Software Designer for a number of software development projects. Of the over 100 different consultants HDS used during the two plus decades Mr. Frankfurter was President, Mr. Fries was by far the most productive/creative designer and programmer his former company employed. Since Coney Island, Inc. , is a relatively new company, the past performance listed below are for a few of the projects Mr. Frankfurter (while President of PSS) and Mr. Fries (while Senior Scientist at Grill Corporation and an independent consultant) were instrumental members of during the last few years:

Coney Island, Inc., had successfully employed Mr. Fries numerous time as a Senior Software Designer for a number of software development projects. Of the over 100 different consultants Coney Island Inc used during the two plus decades Mr. Frankfurter was President, Mr. Fries was by far the most productive/creative designer and programmer his former company employed.

Coney Island Inc.'s current organizational structure is displayed in Figure 9.

Coney Island Inc.'s plans and timelines for obtaining needed business development expertise and other necessary personnel are displayed in Figure 10.

### **7.5 Production and Operation**

In this section, we describe product development to date as well as milestones and plans for reaching production level, including plans for obtaining necessary physical resources.

Coney Island Inc.'s product development to date is described in the process called "EHBs to Build EHBs" which define the entire development and marketing of EHBs customer applications. This RCT of this process can be found at <http://ehbs.us/etbes/>.

Coney Island Inc.'s milestones and plans for reaching production level are outlined in Figure 11. .

Coney Island Inc.'s plans for obtaining necessary physical resources are outlined in Figure 12.

Technical/Business Personnel	Qualifications
<b>Fu Kuo Chang, Professor, Stanford University, Chairman, Acellent</b> Guide company direction, finance and capitalization, public relations, technology promotion.	Education: Ph.D. University of Michigan <ul style="list-style-type: none"> <li>World renowned expert structural health monitoring, Co-inventor SMART layer</li> <li>Editor, Structural Health Monitoring</li> <li>More than 200 papers</li> </ul>
<b>Mark Lin, V.P of Technology</b> Direct R&D activities, oversee day-to-day operation, personnel management, purchasing and acquisition.	Education: Ph.D. Stanford University <ul style="list-style-type: none"> <li>Co-inventor SMART Layer,</li> <li>Composite structures and technology</li> <li>Printed circuit design and fabrication</li> </ul>
<b>Shawn Beard, Director of Systems Integration</b> Oversee structural testing, analyses, damage modeling/simulation, and diagnostic software development	Education: Ph.D. Stanford University <ul style="list-style-type: none"> <li>Engineer/Scientist, McDonnell Douglas</li> <li>Finite Element Analysis, ABAQUS</li> <li>Matlab, Signal Processing</li> </ul>
<b>Amrita Kumar, Director- Projects and Technology</b> Oversee project management & scheduling, new technology, external contacts, and funding	Education: Ph.D. Drexel University <ul style="list-style-type: none"> <li>3D braided composites</li> <li>Project Management</li> <li>Federal Contracts and regulations</li> </ul>

Figure 8. Coney Island Inc. expertise.

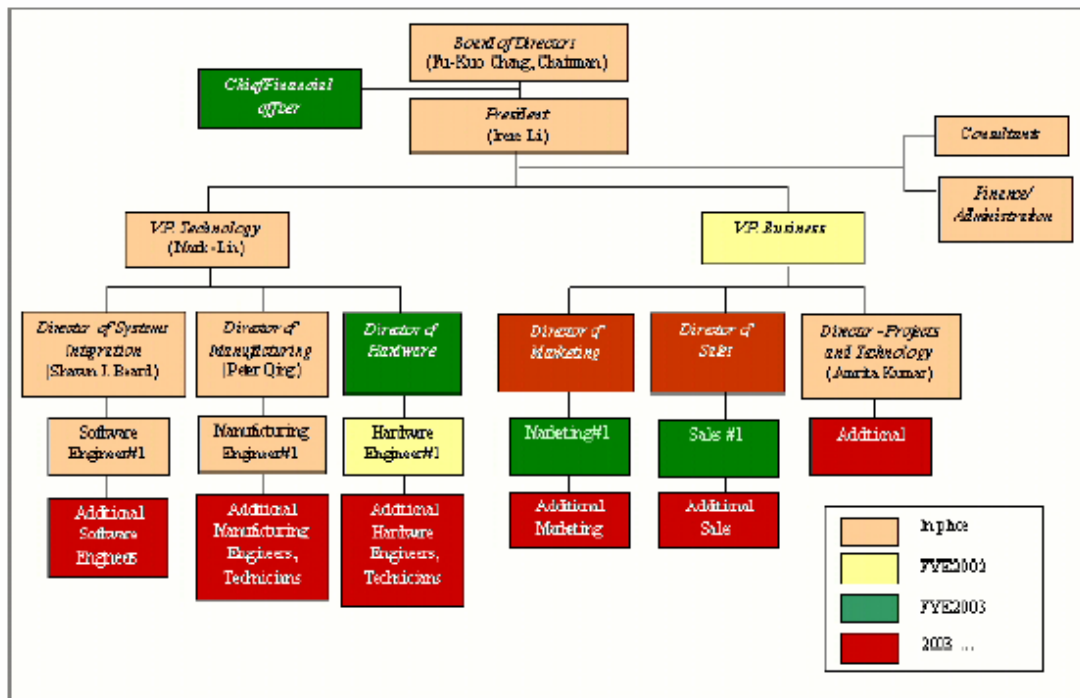


Figure 9. Coney Island Inc.'s current organizational structure.

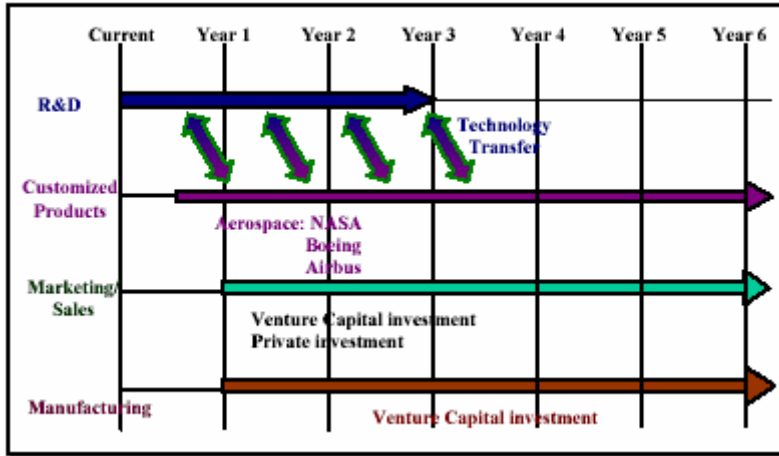


Figure 10. Coney Island Inc.'s plans and timelines for obtaining needed business development expertise.

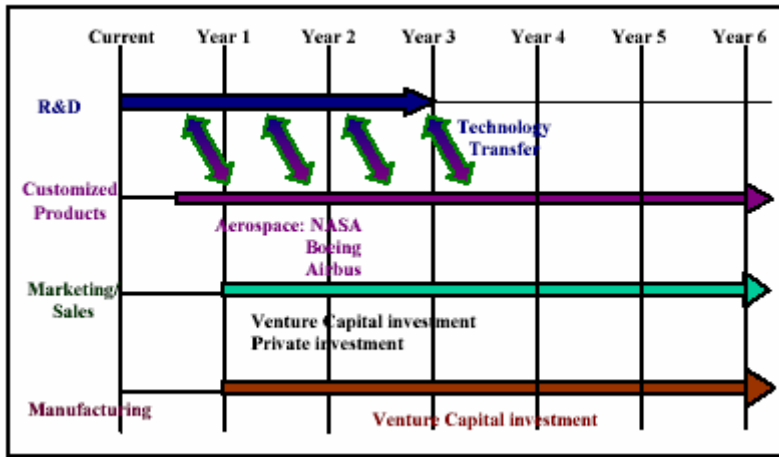


Figure 11. Coney Island Inc.'s milestones and plans for reaching production level.

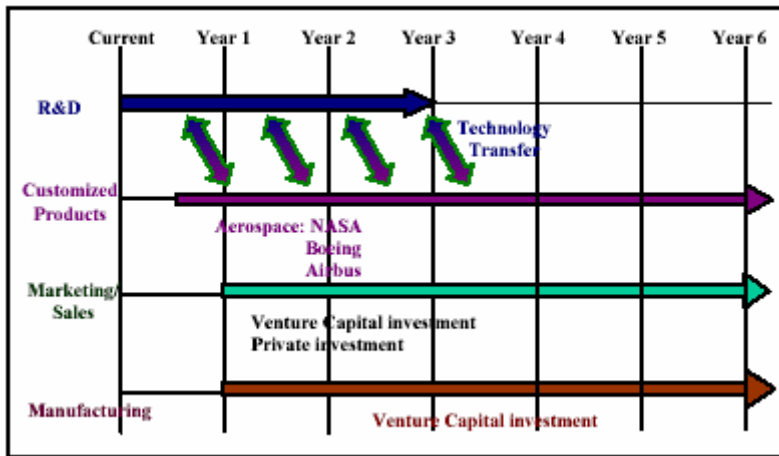


Figure 12. Coney Island Inc.'s plans for obtaining necessary physical resources.

## **7.6 Financial Planning**

In this section, we delineate private financial resources dedicated to development of product or Service (both business development and technical development) to date. Describe the expected financial needs and potential sources to meet those needs that will be necessary to bring product or service to market. Provide evidence of current financial condition, e.g., standard financial statements including a current cash flow statement.

Coney Island Inc.'s private financial resources dedicated to development of product or service (both business development and technical development) to date

Coney Island Inc.'s expected financial needs and potential sources to meet those needs that will be necessary to bring product or service to market

Coney Island Inc.'s evidence of current financial condition, e.g., standard financial statements including a current cash flow statement is seen in Figure 13.

## **7.7 Intellectual Property**

In this section, we describe patent status, technology lead, trade secrets or other demonstration of a plan to achieve sufficient IP protection to realize the commercialization stage and attain at least a temporal competitive advantage.

Coney Island Inc.'s patent status, technology lead, trade secrets or other demonstration to realize the commercialization stage and attain at least a temporal competitive advantage.

Coney Island Inc. has 3 patents and an additional 7 applied for or in process.

<b>Pro-Forma Cash Flow</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Net Profit:</b>	(\$1,771,873)	(\$2,414,560)	\$7,255,557
<b>Plus:</b>			
Depreciation	\$870,000	\$1,400,000	\$3,000,000
Change in Accounts Payable	\$248,404	\$608,043	\$1,400,862
Current Borrowing (repayment)	\$0	\$0	\$0
Increase (decrease) Other Liabilities	\$0	\$0	\$0
Long-term Borrowing (repayment)	\$0	\$0	\$0
Capital Input	\$15,000,000	\$0	\$0
<b>Subtotal</b>	<b>\$14,146,531</b>	<b>(\$406,517)</b>	<b>\$11,656,419</b>
<b>Less:</b>			
Change in Accounts Receivable	\$398,477	\$1,207,291	\$4,866,713
Change in Inventory	\$0	\$0	\$0
Change in Other ST Assets	\$0	\$0	\$0
Capital Expenditure	\$6,260,000	\$5,000,000	\$3,000,000
Dividends	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$6,658,477</b>	<b>\$6,207,291</b>	<b>\$7,866,713</b>
<b>Net Cash Flow</b>	<b>\$7,488,054</b>	<b>(\$6,613,808)</b>	<b>\$3,789,706</b>
Cash balance	\$7,488,054	\$874,245	\$4,663,951

<b>Pro-forma Balance Sheet</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Short-term Assets</b>			
Cash	\$7,488,054	\$874,245	\$4,663,951
Accounts receivable	\$398,477	\$1,605,768	\$6,472,481
Inventory	\$0	\$0	\$0
Other Short-term Assets	\$0	\$0	\$0
<b>Total Short-term Assets</b>	<b>\$7,886,531</b>	<b>\$2,480,014</b>	<b>\$11,136,433</b>
<b>Long-term Assets</b>			
Capital Assets	\$6,260,000	\$11,260,000	\$14,260,000
Accumulated Depreciation	\$670,000	\$2,070,000	\$5,070,000
<b>Total Long-term Assets</b>	<b>\$5,590,000</b>	<b>\$9,190,000</b>	<b>\$9,190,000</b>
<b>Total Assets</b>	<b>\$13,476,531</b>	<b>\$11,670,014</b>	<b>\$20,326,433</b>

<b>Debt and Equity</b>			
	<b>2003</b>	<b>2004</b>	<b>2005</b>
<b>Accounts Payable</b>	\$248,404	\$856,447	\$2,257,308
Short-term Notes	\$0	\$0	\$0
Other ST Liabilities	\$0	\$0	\$0
<b>Subtotal Short-term Liabilities</b>	<b>\$248,404</b>	<b>\$856,447</b>	<b>\$2,257,308</b>
Long-term Liabilities	\$0	\$0	\$0
<b>Total Liabilities</b>	<b>\$248,404</b>	<b>\$856,447</b>	<b>\$2,257,308</b>
Paid in Capital	\$15,000,000	\$15,000,000	\$15,000,000
Retained Earnings	\$0	(\$1,771,873)	(\$4,186,433)
Earnings	(\$1,771,873)	(\$2,414,560)	\$7,255,557
<b>Total Equity</b>	<b>\$13,228,127</b>	<b>\$10,813,567</b>	<b>\$18,069,124</b>
<b>Total Debt and Equity</b>	<b>\$13,476,531</b>	<b>\$11,670,014</b>	<b>\$20,326,433</b>
Net Worth	\$13,228,127	\$10,813,567	\$18,069,124

Figure 13. Coney Island Inc.'s evidence of current financial condition

**Pro-forma Income Statement**

	2003	2004	2005
<b>Sales</b>	\$2,419,498	\$9,750,000	\$39,300,000
<b>Direct Cost of Sales</b>	\$598,749	\$3,750,000	\$16,280,000
<b>Production</b>	\$253,800	\$425,000	\$796,000
<b>Total Cost of Sales</b>	\$852,549	\$4,175,000	\$17,076,000
<b>Gross margin</b>	\$1,566,949	\$5,575,000	\$22,224,000
<b>Gross margin percent</b>	64.78%	57.18%	56.55%
<b>Operating expenses:</b>			
<b>Total Sales and Marketing Salaries Expenses</b>	\$392,000	\$2,854,000	\$3,585,000
<b>Sales and Marketing Salaries Percent</b>	16.20%	29.27%	9.12%
<b>Total General and Administrative Salaries Expenses</b>	\$1,435,195	\$2,579,200	\$5,011,553
<b>General and Administrative Salaries Percent</b>	59.32%	26.45%	12.75%
<b>Total Other Salaries Expenses</b>	\$1,954,596	\$3,160,000	\$4,558,000
<b>Other Salaries Percent</b>	80.79%	32.41%	11.60%
<b>Total Operating Expenses</b>	\$3,781,791	\$8,593,200	\$13,154,553
<b>Profit Before Interest and Taxes</b>	(\$2,214,842)	(\$3,018,200)	\$9,069,447
<b>Interest Expense ST</b>	\$0	\$0	\$0
<b>Interest Expense LT</b>	\$0	\$0	\$0
<b>Taxes Incurred</b>	(\$442,988)	(\$803,640)	\$1,813,889
<b>Net Profit</b>	(\$1,771,873)	(\$2,414,560)	\$7,255,557
<b>Net Profit/Sales</b>	-73.23%	-24.76%	18.46%

Figure 13. Coney Island Inc.'s evidence of current financial condition (continued)