
Website Development Process

From Planning through Design and Production
to Launch and Ongoing Upkeep

RNA Studio

www.rna.ca

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Unique Process, Unique Results

RNA Studio develops websites for clients who are looking for something different, and they fall into three groups.

The first group is exacting and sophisticated.
They want **function and beauty** in a neat package.

The second group wants something cool, fun, and exciting. They want their website to reflect their character, to distinguish themselves from the competition in a **truly memorable** way.

The third group wants it all.

And so RNA Studio designs websites that may be big and complex yet are easy to navigate, look out of the ordinary yet are welcoming, and are functionally rigorous and aesthetically refined.

A unique goal requires a suitably unique approach. The web, the internet, and peripheral **technologies are evolving** very quickly and flexibility is essential. RNA Studio has developed a process that takes advantage of the fluidity of the electronic medium.

Since planning and design are essentially creative activities, the client will be guided through an itinerant process. Experience has shown that an understanding of **underlying principles** is more useful than a critical path document.

In lieu of a project plan, **milestones** at key intervals create opportunity to objectively evaluate progress and reinforce communication channels. Milestones are supported by formal client **sign offs** of work. This creates respect for the process by giving weight to decisions and ensures that the short and long term goals of the project are being met.

The list and explanations of typical steps will help the client make **better decisions** throughout the project because the effects of those decisions can be placed in both the immediate and longterm context.

A glossary of technical terms is included towards the end of the documents, and an overview of RNA Studio is on the last page.

Typical Phases of Work

Phase	Guiding Document	Typical Results	Budget Notes
Planning	Website Planning Agreement	<ul style="list-style-type: none">• Project goals and strategies defined.• Resources gathered and analyzed.• Functional mini-website.• Scope of work and list of services for next phase clearly defined.	20% to 50% of total website budget. Deposit payment of min. \$500 and a final payment upon completion.
Design and Production	Website Design and Production Agreement	<ul style="list-style-type: none">• Final website.• Email addresses set up.• Plan for website updates set up.	50% to 80% of total website budget. Deposit payment of min. \$500, one or more interim payments, and a final payment upon completion.
Ongoing Upkeep and Support	Ongoing Services Agreement	<ul style="list-style-type: none">• Website stays up to date and relevant.	Fees charged by the half hour.

Compact projects of predictable scope of work are usually guided by a single contract. In larger projects each phase of work as described in this document is typically guided by a separate agreement or contract.

The main result of the planning phase is a definition of the scope of work and comprehensive list of deliverables that is then included in the Website Design and Production Agreement and defines the budget.

Planning Phase

The successive steps of planning, design, production and website launch build directly upon each other, and so carefully defined goals and strategies are crucial to the successful completion of the project and ongoing satisfaction with the website in the future.

During the planning phase, clients who are building their first website gain knowledge of the numerous technologies and issues involved and an understanding of the role that they themselves will play in the process.

Clients faced with the redevelopment of an existing website benefit from a careful analysis of the previous process so that past development mistakes are not repeated, and those aspects of the existing website that worked well or were appreciated can be retained.

Potential myths can be debunked and expectations put into context. The often overwhelming array of choices and opportunities that the electronic medium offers can be explored without the immediate commitment to a larger project or budget.

Typical Steps

1. **Review client needs** and start project

Analyze initially available content and all resources, discuss budget, draft a list of deliverables, set out the terms of service of the planning phase, **sign agreement** (contract) and transfer **deposit payment**.

2. **Define the essential goals** of the project.

For example, who is the specific target audience? What active role will a successful website fulfill in the organization on a weekly/monthly/yearly basis? Are there unique aspects of the site that fulfill goals that cannot be met in any other way? These need priority.

Define the essentials and the luxuries. Exploit the medium and at the same time mark its limits.

3. **Develop specific strategies** to meet goals.

For example, some goals will be supported through explicit technical specifications. Others will be met through development of specialized site content.

Plans need to be made for website updates and growth. To what extent does the website content change? Some content might change on a weekly basis, others monthly or seasonally. Plans and expectations for site updates need to be reasonably considered.

Strategies for site growth are very important, because they will affect site navigation choices.

4. **Define site performance parameters.**

- a. Which platforms and browsers is the site optimized for?
- b. What screen resolution is the site optimized for and does it stretch to fill the browser window (liquid site)?
- c. Are any sections of the site password protected? Is there Anonymous FTP access?
- d. What are the most important content elements?
- e. What content elements are grouped together?
- f. Is there content that should be available from each page?
(Ex. announcement or news.)
- g. If there is dynamically generated content (e.g. web cams, database search results) what are the specifications for this and who is responsible for supporting the feature?
- h. How are Cascading Style Sheets (CSS) used?
- i. What is the level of commitment to W3C recommendations?
- j. Is there sound or video on the site? In what parts?
- k. What sections of the site are expected to grow and how will this affect navigation?
- l. What parts of the site will be updated frequently?
- m. Who will do the updates to the website after it is complete?

5. **Sign off on goals, strategies, and performance parameters.**

6. Determine and register a **domain name**.

A domain name must be chosen and registered with a domain registrar. The most successful domain names communicate the essence of the organization's purpose as well as the name of the organization and are short, easy to remember and easy to spell.

7. Engage the services of a **website host**.

Website goals and strategies will inform the choice of a website host. Examples of issues include disk space (file storage space), quality of customer service, and back end technical features, for example the ability to securely host a shopping cart database.

RNA Studio typically requires direct access to the hosting server during the development and production phase.

8. Put up a one page **mini website**.

A simple splash page that is nevertheless fully functional and includes basic company information, a contact form, and visitor statistics. It provides immediate gratification and builds energy and momentum in the project.

9. Set up **email addresses** at the newly registered domain address.

Please note that beyond setting up the username addresses and passwords on the server, email support is provided by RNA Studio on an hourly fee basis.

10. Start **content development** – initial gather, edit and organization.

Content is by far the most challenging aspect of any type of website development.

The main purpose of addressing this central website element in the planning phase is to estimate the number of levels of hierarchy that the content will have, since this will have direct impact on the complexity of the navigation system needed.

The secondary purpose is to create a plan for developing content for the website. It is a particularly rewarding strategy to treat content development as a creative activity, so a good dose of enthusiasm at this stage is required.

11. Establish **scope of work and deliverables lists of the next phase** for both the website developer and the client side.

12. **Review budget** for the next phase of the project, based on revised scope of work.

Financial issues are a consideration throughout the planning process. Quotes are prepared and revised for specific aspects of the project.

The budget is a list of services and products and may be *a la carte*, hourly, or fixed, or a combination that best suits the specific project considerations.

13. **Review completion of Planning Agreement deliverables.**

Design and Production Phase

Design is not just what it looks like and feels like. Design is how it works.
- Steve Jobs, Apple cofounder

Typical Steps

14. Review and sign contract and transfer deposit.

15. Based on site goals, **develop a look and feel**.

Careful planning means that graphic design proceeds smoothly because expectations are known. Look and feel designs are developed at the same time as site navigation. Revisions bring the whole systematically forward towards completion.

- a. Design **logo** and/or create identity art - for example, custom or stock photography, digital art, freehand illustration, etc.
- b. Determine **colour palettes**.
- c. Design presentation of **text content** - decide on fonts and presentation of titles, sub headings, paragraphs, and captions.
- d. Design presentation of **graphic content** – decide how photographs, diagrams, charts and icons will be treated.
- e. Determine how **enlarged images** will be made available, (ex. with pop-up windows)
- f. Determine use and treatment of **dynamic content** – Flash, video, live feed content (ex. from web cams).
- g. Determine how **password protected** sections are accessed in terms of look and feel.

16. Develop the **website architecture**, based on project goals and content development strategies. Especially important is the current and future number of levels of content.

Note that pages listed in the architecture are a guide on the structure of the website, and are not intended to define the number of pages in the final website. The scope of work is defined in the list of deliverables, and site architecture is *one of the items* in that list.

17. **Sign off on look and feel and site architecture.**

18. Develop the **navigation system** and **page layout templates** (graphic design) based on website architecture and look and feel specifications.

- a. Determine the **presentation of links** in every typological instance – text (headings, paragraph, caption), images, primary and secondary navigation
- b. Layout **page master elements** (repeating on every page): page header, footer, and primary navigation
- c. Layout **page type templates** (minimally home page and secondary page)
- d. Design whole **navigation system** to relevant level of depth.

19. Create storyboards

Storyboards ultimately make sense of the whole website presentation and accurately demonstrate the scale of content, use of still and motion graphics, precise navigation, and the layout of each and every distinct page type.

Storyboards are also utilized throughout the whole of the production process for final approvals of specific page layouts. There are no surprises when the site is launched.

20. Final design changes submitted by client.

21. Sign off on storyboards.

22. Production stage - codify design elements

Once the storyboards are approved, the production steps move fairly quickly. Templates are generated for all the different page types. Once the content is ready, the templates are copied and populated and any minor page specific adjustments are made to the layout and code.

The use of templates, style sheets, and repeating code greatly speeds the production process and also enables global changes later on. Style sheets, for example, are similar to styles in Microsoft Word. They control all the different ways that specific site elements are laid out, for example text size and colour, image alignment, and navigation behaviour.

- a. Codify page type template layouts
- b. Codify style sheets for website
- c. Finalize and optimize graphic elements (ex. logos)

23. Review skeletal website against goals.

24. Test performance of website page layouts and CSS styles in browsers and platforms (performance parameter adherence).

25. Sign off on skeletal website.

26. Final push on content activity – final development, final submission and final changes to content documents, plans made for including omissions that might not be caught (deadlines on guarantee ends...), proofreading.

27. Make final changes to content organizing documents.

Content editing must happen *before* it goes into html. It is much easier to spot spelling mistakes while scanning a list of names and addresses than when flipping through a few dozen pages. It is noteworthy that budgeting for a professional writer or copy editor might be a very worthwhile investment for a part or whole of the website since writing for the web is quite different than for print.

28. Sign off on content.

- 29. Populate website with content.
- 30. Proofread website content for typos.
- 31. Test all website links.

32. Sign off on substantial completion

33. Beta launch

- 34. Period of review and submission of **absolutely final changes.**

The site is live on the web and in its final location. It may still be protected by a password. Final revisions may include minor content adjustments such as fixing spelling mistakes, code glitches such as broken links, or graphic adjustments such as re-optimizing motion graphics. Then there is the final launch (Alpha launch) and the site is live. It is then submitted to search engines for indexing.

35. Alpha launch

Ongoing Upkeep and Support Services

Retaining RNA Studio for ongoing services after the completion of the project is an easy and reliable way of keeping the website up to date and current.

Small changes such as updates to content elements that become outdated over time, putting up announcements and seasonal greetings or adding new content to existing pages (such as new staff) is as simple as sending an email.

Requests are fulfilled within several days or less, often within several hours. Rush work is typically billed at the regular rate, and all work is billed by the half hour, making this a straightforward and budget conscious choice.

Changes on a larger scale, such as adding altogether new pages or sections are met with expert support by a familiar source. Clients may request a set price quote for sizeable projects.

For many good reasons, some companies do their own website updates. Sometimes they still maintain a relationship with RNA Studio, for example to support in-house webmasters.

In addition, RNA Studio offers many communication services beyond website development. For example, logos initially conceived for online use can be adjusted for print or other media, such as for inclusion in PowerPoint presentations.

RNA Studio Overview on the last page of this document describes the range of services offered and explains the many ways in which the company continuously builds its knowledge base to stay up to date on technological and cultural issues.

Glossary

Anonymous FTP

File Transfer Protocol (FTP) is used to connect two computers over the internet so that the user of one computer can transfer files and perform file commands on the other computer. Sometimes parts of a server or computer are granted anonymous access (an external user does not need a username or password, or both are set to recognize “anonymous”) for the purpose of easy transfer of files. An anonymous FTP interface can be designed to integrate seamlessly with the look and feel of a client website.

Cascading Style Sheets (CSS)

Style sheets in the form of written documents have a long history of use by editors and typographers to ensure consistency. CSS is a style sheet language used to describe the presentation of a web page written in HTML. The CSS specifications standards are regulated by the W3C. In websites, style sheets are mostly used to ensure consistency of visual presentation across all pages.

Domain Name Registrar

A company accredited, either by the Internet Corporation for Assigned Names and Numbers (ICANN), or by a national ccTLD authority (CIRA in Canada) or both, to register internet domain names and manage end-user information (such as contact info and renewal dates). An end-user alone cannot do this directly with ICANN, so a registrar sells the service of doing this on their behalf.

Domain / Subdomain Name

The most common type of domain name is a hostname that provides a more memorable set of words to stand in for numeric IP addresses. Domain names are sometimes colloquially (though technically incorrectly) called “web addresses”.

A subdomain is a domain that is part of a larger domain.

Example www.biochemistry.utoronto.ca is a subdomain of www.utoronto.ca

HTML

Hypertext Markup Language (HTML) is the predominant language for creating web pages. It describes the structure of text-based information (by denoting elements as headings, paragraphs, lists, etc.) and supplements that text with embedded objects (such as images, video, interactive forms, etc).

Hypertext

Literally, “more-than text”, “super-text”, “evolved-text”. In the context of the web, text interconnected by links in such a way that it may be read in various orders.

Internet

The publicly accessible, interconnected network of millions of smaller domestic, academic, business, and government computer networks that transmit around the world electronic data and services such as e-mail, online chat, file transfer, and the interlinked web pages and other documents of the web.

Launch, Beta and Alpha

In website development, a beta launch is when a website is moved into its final position on the server, “connected” to the domain name, a password screen is removed, or the project is otherwise made available to end-users for the first

time. Although complete to the best knowledge of the client and designer, a beta launch acknowledges that the final changes mentioned above could still have repercussions. Once any of these are cleared up and/or the designated testing or warranty period is up, the website is declared to have gone through an alpha launch.

Screen Resolution

Refers to the number of distinct pixels in each dimension that can be displayed on a screen (ex. computer, television, mobile phone, etc.)

IP Address

An internet protocol (IP) address is the equivalent of a street address or a phone number for a computer or other network device on the internet.

Website

Collection of various files, both apparent (text, images, video) and hidden or in the background (style sheets, scripts) that together create a web presence at a unique domain name or subdomain name.

Website Host

A company that provides space on a server (that it owns or rents from another host) for storing client website files and connects those files to the internet for viewing through the web. The scopes of hosting services vary widely.

World Wide Web, the Web

A system of interlinked, hypertext documents (web pages) that runs over the internet.

W3C

The World Wide Web Consortium, the main international standards organization of the web.

W3C Compliance

W3C publishes the W3C Recommendations for the development and implementation of HTML and peripheral software technologies, such as CSS. The goal is to foster compliance amongst international industry members that will result in a decrease of display problems of web pages in different browsers and on different platform. Like any standards of other organizations, W3C Recommendations are sometimes implemented partially, and the W3C defines levels of conformance that developers must follow if they wish to label their product W3C compliant.

RNA Studio Overview

RNA Studio was founded in 2000 as a multidisciplinary company offering communication strategy services such as:

- website development
- identity design
- graphic design for print and web
- photography

Services are offered in the atmosphere of collaboration with the client. The ultimate goal is to identify the essential elements of content in any given project and then to give that content form.

Magda Wojtyra has degrees in Environmental Studies and Architecture from the University of Waterloo, supplemented by courses in photography and pre-press from Ryerson Polytechnic and Ontario College of Art. Prior to founding RNA Studio she worked for architectural firms in Toronto and New York City. Throughout her formal education and professional training she actively sought out projects that used websites and online tools as integral parts of the design process and design presentation.

RNA Studio grew out of RNA Connective (1999 to 2000), a multidisciplinary cultural research team affiliated with the McLuhan Centre at the University of Toronto. Magda founded the connective to study issues of communication, community, and social and individual identity in the digital age. The resulting projects ranged from editorial articles for Italian Domus Magazine to group participation in international conferences in the roles of brainstorming consultants.

Continuing in that spirit, members and affiliates of RNA Studio keep up to date on all aspects of best practice through a very wide range of activities. They network online in forums and discussion boards and maintain a variety of online presences. They attend events and network in the world wide world with professionals and enthusiasts in a very eclectic cultural milieu, including artists and designers, educators and scientists, academic researchers and businessmen, journalists and world travelers, language and communication technology experts, ecologists and hackers – the list goes on! Perhaps most importantly, RNA Studio actively participates in and pays close attention to the do it yourself culture.

Such a wide range of knowledge and influence is essential to predict cultural and industry development so that designs remain relevant and technologically viable for the longest time span possible.

Selected client list for website, identity and presentation projects:

- Department of Biochemistry, University of Toronto
- Grant Brown, Igor Stagljjar, and Charlie Boone research labs, U of T
- Russel Bishop Lab, McMaster University, Hamilton
- Toronto Public School Board
- Toronto Principals' Centre
- The Design Exchange, Toronto
- Gladstone Hotel, Toronto
- St. Thomas Hospital, NHS England
- National Geographic Traveler online magazine