



Seasteading Business: Context, Opportunity and Challenge

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Our Mission: To further the establishment and growth of permanent, autonomous ocean communities, enabling innovation with new political and social systems.

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It's easy to be captivated by the vision of seasteading: a floating metropolis with new rules governing a new way of life; a cluster of semi-submersibles ringed by commuter boats each going about its business; a network of sea-based villages living in prosperity, pluralism and peace. It can all seem utopian, if not a little sci-fi.

But building free cities on the sea won't be easy. When it happens, it will happen one business at a time. Part of our mission here at The Seasteading Institute is to bring about global change through incremental, market-based solutions. In light of that mission, we would like to offer an analysis of the context, opportunities and challenges entrepreneurs will face starting businesses on the sea.

Specifically, we'll touch on three areas, corresponding to three sections:

I. Context

- What forms will seasteading businesses take?
- What are some of the critical issues related to seasteading business?

II. Opportunities

- Why does running a business outside existing states' jurisdiction offer opportunities?
- What kinds of opportunities arise from doing business at sea?
- What are some specific industries likely to arise from seasteading?

III. Challenges

- What are some of the legal challenges?
- What are some of the engineering challenges?
- What are some of the political challenges?

Starting a seasteading venture represents a formidable challenge. Yet we hope this paper allows readers to navigate what might otherwise be treacherous entrepreneurial waters.

I. Context

What forms will seasteading businesses take?

When referring to seastead, it is sometimes useful to parse more basic aspects. These aspects give rise to an admittedly rough taxonomy of business forms based on how a seastead functions. In other words, sometimes it is simply not enough to refer to seasteading generically. One may need to pick out either some physical or functional aspect. We've decided to isolate these aspects and define them so potential entrepreneurs have a working vocabulary for issues they are likely to face upon start up.

Physical Platform. Seasteading depends on man-made structures. Whether a ship, a semi-submersible or a floating vessel,¹ these structures will provide the physical foundation for any seasteading business. Let's call this structure the *physical platform*.

Discrete Business. Once the physical platform is constructed, people will want to do business aboard seasteads. So an entrepreneur may decide to start what we refer to as a *discrete business* aboard the physical platform. For the purposes of this discussion, however, a discrete business is a corporate entity considered separately from the physical platform(s) or territory on which it might rest.²

Platform Operations. Any physical platform, whether business or residential, will require operations – including management, upkeep and administration. In some cases, platform operations will be carried out directly by the platform owner. In other cases, the platform owner will hire a management company to oversee operations. Whatever the case, responsibility for a platform lies ultimately with the platform owner(s).

Seasteading Business Forms

With the more basic aspects defined, we can now discuss what we'll refer to as the seasteading *business forms*. These forms are a way of looking at how seasteads are likely to function, which allows us to decompose them. Business forms become apparent when answering questions like: *Who owns what? Who controls what? Who manages which operations?*

Corporate Seastead. In some instances, there will only be a single, discrete business aboard a given physical platform. Whether that business is a natural gas company on a massive floating platform, or a single person selling hotdogs from a tiny boat, we refer to either instance as a “corporate seastead.” With corporate seasteads, the owner of the physical platform and the owner of the

¹ Other physical platforms may include barges, floating houses, Floating Production Storage and Offloading (FPSOs) and Very Large Floating Structures (VLFSs).

² Note: some entrepreneurs may form a discrete business whose sole responsibility is to manage the operations of a physical platform.

business are one and the same. (Note that it is common for ship owners to outsource operations to a ship management company. And this may hold across all business forms.)

Conglomerate Seastead. In other instances, we can imagine multiple discrete businesses operating aboard a physical platform – businesses all of which are subsidiaries of a single firm. For example, imagine a platform owner who also owns a restaurant, a fitness center and a hotel aboard the seastead. When a single corporate body controls all of the discrete businesses on board (as subsidiaries), we call this a “conglomerate seastead.” Modern day cruise ships can be examples of this type of business form.

Lessor Development Seastead. Sometimes the developer of a physical platform will not want to own any discrete business aboard the seastead. Instead, he or she (or the leadership of a corporate entity) will want merely to own the physical platform, and invite tenant businesses to lease space on board. We call this a *development seastead* with a “lessor” designation. The two primary constituents in this form will be: a) The lessor, i.e. seastead developers whose primary business is to attract tenant businesses or residents and; b) The tenant, i.e. a lessee who will likely benefit from the flexibility of leasing and prefers seastead platform operations be an external function of his/her business. (Note again that seastead operations can be outsourced.)

Seller Development Seastead. The developer of a physical platform may decide not to be the long-term owner of the physical platform, nor to lease space to other discrete businesses. Instead, he or she may decide to parcel out sections of the platform and sell them much as neighborhood developers do on land. We refer to this form as a *development seastead*, as well – only with a “non-lessor” or “seller” designation. The two primary constituents in this form will, of course, be seller of the parcels and individual commercial or residential buyers.

Associated Seastead. Soon after developers sell parcels of a non-lessor development seastead to individual residents or businesses, the parcel owners will still have to find a way to coordinate platform operations. In such a case--as with home-owners associations on land--the various parcel owners are likely to organize an *association*, i.e. an organization whose express purpose is to manage seastead operations. This association will be distinct from the discrete businesses on board, but function at the behest of--and be accountable to--all the businesses taken as a group.

Hybrid Seastead. A number of combinations of the above seasteading forms are possible. For example, we can imagine a developer seastead in which a portion of the seasteads are owned and leased by the physical platform owner while others are parceled off and sold. Whatever the combination, “hybrid seastead” suffices as a catch-all for purposes of this discussion.

When entrepreneurs are planning their core businesses, each will have to decide if it is worth the start-up capital and administrative costs to own and operate a physical platform. For some, this will be good business--as when a venture centers on creating an integrated experience for tourists.

Others, like knowledge-based businesses or tech startups, may be happy to leave the details of the look, feel and operations of the seastead to someone else; they may opt to lease space instead.

Whatever the case, understanding these forms is similar to the kinds of decisions entrepreneurs have to make on land. But there are critical differences: the modularity and mobility of seasteads add a dimension that makes seasteading business that much more dynamic. For example, if you could move your entire business or medical complex from coordinates off the coast of Mauritius to an area off the Gulf of Oman -- in a week -- what might this mean for your tenants and their customer-base? And would you benefit from quickly situating your business or medical complex among other seasteads with similar or related businesses? As we will discuss later, questions about being a lessor or a tenant -- a full owner or a partial owner -- are not only unavoidable, but have a direct bearing on one's strategy in the short, medium and long term seasteading business strategy. (See "Mobility" under the Critical Issues subsection below.)

What are some of the critical issues related to seasteading business?

There are five critical business-related issues³ that we will examine in light of seasteading business, all of which overlap to a considerable degree:

- Geographic Location
- Logistics
- Marketing
- Legal
- Mobility

There are, of course, other critical issues any entrepreneur would have to face on land or sea. But we consider these five to be, in some way or other, uniquely interesting to examine from the perspective of seasteading business.

Geographic Location

One of the most crucial decisions a seastead entrepreneur will make is a choice of location. To complicate matters, there are at least three senses of location, relevant depending on what your business model is: 1) *macro* - a certain geographic location for a seastead platform; 2) *micro* - a certain position aboard a seastead platform; 3) *relative* - location *relative to* other nearby seastead platforms or seastead businesses aboard a seastead platform. Location questions may also pop up with greater frequency than they might for a seasteading entrepreneur's territorial counterparts.

³ Again, we should offer a caveat: We cannot be comprehensive in cataloguing every issue seasteading entrepreneurs will face. These issues are simply the most salient to our minds at this early stage.

Generally speaking, the seastead entrepreneur will have to look for agreeable environmental, legal and economic locations. From the economic point of view, the question of location boils down to *access to customers*. If one is running a lessor development seastead, his or her customers are lessee seasteading entities--i.e. residential tenants or discrete business tenants. The seastead lessor must have some understanding of what the tenant business's needs will be--not least of which is a location that is likely to help tenants thrive. We can imagine, for instance, a shipstead with only office space on board. The lessor has decided to attract knowledge economy businesses aboard the shipstead. Where should she locate?

Also, because there are various economic zones that extend out from a coastline, location issues overlap with legal issues very quickly. Consider the composition of a seastead in terms of which businesses are harvesting resources. What percentage of the businesses have activities that are forbidden by the regulations of a nation's EEZ⁴? Will moving onto the high seas help or hurt those businesses? What about the businesses who depend on proximity to land? What about pure knowledge economy plays? The overlap of location and legal questions will determine the composition of many seasteads. Indeed, most of the questions about location and law are likely to occur *ex ante* rather than *ex post*.⁵

Of course, because knowledge-economy businesses tend to cluster in certain cities, seasteads may accrete offshore near cities like Redmond, Washington or San Francisco, California. Indeed, might seasteads catalyze new innovation "mirror clusters"?⁶ For example:

- Mediterranean - Mirror cluster near Sophia-Antipolis/Cannes--France
- Mediterranean II - Mirror cluster near Tel Aviv--Israel
- Asia-Pacific I - Mirror cluster near Shenzhen, Hong Kong or Macao--China
- Asia-Pacific II - Mirror cluster near Yokohama-Tokyo--Japan
- N. American Atlantic - Mirror cluster near Boston or New York--USA

Because the knowledge-worker shipstead is not attempting to harvest the sea's natural resources, there may be legal and economic reasons to move closer in.⁷ Consider that a mining seastead would be prohibited from extraction within 200 miles of a country's shoreline due to United Nation conventions, while sea-surface activities like running a tech start-up would not likely be prohibited.

⁴An EEZ, or Exclusive Economic Zone, is an internationally recognized maritime law which states that a coastal state shall have control over the ocean's resources extending up to 200 miles from shore.

⁵ This is more or less the *raison d'être* for the Seasteading Institute's legal and business series.

⁶ For more on innovation clusters worldwide, here's a slightly dated (2006) map created by McKinsey: http://whatmatters.mckinseydigital.com/flash/innovation_clusters/

⁷ For more detail on legal questions, see also "[Charting the Course for a Seateader's Legal Strategy](#)" by Dario Mutabdzija and Max Borders.

Whatever location the lessor decides upon, her business will thrive based on her ability to attract and retain tenants. That, in turn, will be contingent upon her tenants' ability to attract and retain customers--a potentially virtuous ecosystem. This may seem obvious to many, but seasteading location questions may come up more frequently due to the dynamism of modularity and mobility. In other words, *the key difference is that the costs of moving a physical platform are far lower for seasteaders on the sea than for business complexes on land.* And that fact changes the dynamics.

The lessor will thus have to create policies or contracts that basically either: a) enables them to reposition the seastead if it makes enough economic sense to do so; or b) assures tenants long term security about location. There may be other nuances to these agreements. Whatever the policy, it will affect every tenant on board. The structure of these agreements -- degrees of freedom to reposition - - will be one meaningful way in which a lessor seastead can distinguish itself from another. As we'll discuss later, although one may be able to move her floating physical platform in a matter of days, things may not be so simple on land (unless, of course, one's business is a mobile unit). In short, a seastead lessor will have to continuously seek out opportunity hot spots on the sea--reconciling these with obligations to existing tenant contracts. Because so many seasteading opportunities will arise from proximity to other thriving seasteads or seastead clusters, location questions are of paramount importance.

For most industries success may mean following some rules of thumb:

- Locate near potential customers with disposable income, for example, as close as legally feasible to a major first-world city.
- Locate near potential customers whose regulatory regimes restrict their access to some product or service, or a lower-cost versions of a product or service. Such may include medical, agricultural, or knowledge-based industries. (More on this later.)
- Locate in an area that provides lower-cost access to supply chains, logistics terminals and other hubs for moving goods and people.
- Locate aboard a platform and/or near other platforms that are likely to offer greater access to customers, and which lower the cost of forming a business 'ecosystem'.

To reiterate: location has macro, micro and relative dimensions. Seastead entrepreneurs will carefully consider all such dimensions, as well as develop contingency plans for doing business in an environment that is likely to be more dynamic than territorial business due to modularity and mobility.

Logistics

Logistics concerns the flow of goods, services, customers -- and the overhead associated with these. For different sorts of firms, there will be different logistics questions. For example, an aquaculture seastead will need to establish a supply chain from its ocean harvest to terminus points on

neighboring seasteads and on land. Or, think of a seastead theme park. How will the themepark get supplies from various ports around the world? How will visitors to the themepark travel to the seastead? Will the seastead platform need to be able to moor large container ships, barges, or just passenger ships?

Obviously, logistics and supply chain questions overlap with location questions like those touched on above. Initially, new seasteads will bear the costs of establishing new distribution channels and supply chain networks. Over time, these networks will become better established, so logistics costs are likely to go down over time. That said, no seastead business will be able to survive without factoring logistics into their overhead costs. (Note: logistics is one entrepreneur's overhead cost, but another entrepreneur's opportunity.)

Marketing

Marketing may be especially important for seasteaders. Skepticism and fear of seasteading businesses may be high, especially at first. Skepticism may come from investors, customers or from the public at large. Indeed, skepticism may arise from fear of the new/unknown, or from agitation by special interests and competitors benefiting from territorial rulesets (i.e. less competition). That may mean that the lines between lobbying and marketing will have to blur. Because many seastead ventures could be threatening to land-based businesses trapped in constrictive rules, seasteading might require a degree of pre-emptive marketing rarely seen in everyday business.

Many seasteading marketing questions will be similar to the kinds of marketing questions people have to tackle in land-based businesses. (And we'll leave these to the marketing pros.) But are there other marketing considerations peculiar to seasteading? Consider:

- Is there any low-cost exposure or earned media that can be gained by virtue of seasteading's novelty as a human enterprise?
- How will seasteaders market when the novelty of seasteading has worn off?
- Given that seasteading is in embryonic stages: who, besides direct customers, will it be important to market to? That is, might it be important for certain seastead businesses to spend a portion of their promotion budgets on longer-term investments, such as maintaining enthusiasm for seasteading in general? Attracting symbiotic business neighbors? Even lobbying?
- How will seasteaders market when they are relatively remote? What about when they are a part of a dynamic platform cluster?
- Is there a marketing opportunity in platform mobility?
- Are there opportunities to engage in co-promotion for seasteading companies?

At the outset, there will be no well-worn paths to the seastead. The benefit of reputation and word-of-mouth campaigns from satisfied customers can only accrue after building a new market the hard

way. Whether one is trying to attract the first trailblazing seastead tenants, visitors from land, new residents, or customers to-or-from various places around the world -- marketing seastead businesses will be challenging.

Overcoming skepticism and informing customers about new commercial realities will require marketing efforts unique to many seastead-based industries. For example, what if your potential customers' first reaction to medical tourism on a shipstead is: "Wait, you're suggesting I get my treatments on a cruise line?" Or "what if the doctors are negligent in some way... will I be able to sue?" Proper branding and attention to public perception can ameliorate these concerns and prevent problems later down the road. Certainly, there will be lessons to take from marketers of land-based medical tourism.⁸

Addressing skepticism about a seasteading business may come down to selling a new *context*, or promoting a familiar product or service *within a new context*. As marketing psychologist Rory Sutherland reminds us: "Behavioural economics shows by and large that every decision people make... is massively affected close to the moment of decision by the context in which you decide." Sutherland says, for instance, that Rolls Royce didn't sell their expensive Phantom cars at a car show -- next to cheaper cars -- they sold them at yacht shows. According to Sutherland, people often think about what things are worth based on "completely arbitrary anchors."⁹ Seasteading will present opportunities for businesses to establish these psychological anchors early on.

We're already familiar with the ways industry marketers take advantage of differences in the prices, rules and regulations from place to place. For example, Eastern and Western European countries compete for businesses and labor. Californians¹⁰ are coming to Texas in droves due to California's deteriorating business climate. Texans have taken advantage of this fact and used it to market to businesses looking to move. Such opportunities will likely be more pronounced on the sea due to the disparities between the legal regimes. (This will be especially true if seasteaders are able to create sovereign entities.) But how does one market such opportunities to customers on land while minimizing resistance from government (and/or competing businesses likely to collude with government)? Providers of medical services, for example, cannot legally market their products in the United States unless they have been approved and licensed by the relevant regulatory institution. Such has proven difficult for the medical tourism industry and providers of seasteading medical services will likely face the same advertising challenges. PR and perhaps even lobbying may come under many marketing budgets.

⁸ See basics of what medical tourism marketing consultants have to say in summary form here:

<http://www.stackpoleassociates.com/services/medical-tourism.shtml>

⁹ <http://www.themediabriefing.com/article/2010-11-24/rory-sutherland-on-the-context-and-behavioural-economics-of-advertising>

¹⁰ <http://www.texaspolicy.com/pdf/2008-09-CompetitiveStates-laffer.pdf>

Let's close our discussion of marketing with another thought experiment: Imagine we're starting a seastead casino. Why will people want to come to our casinostead rather than to Las Vegas or Monaco? What sorts of clientele are we trying to attract? Are there amenities available on our casinostead that are not available on land due to legal restrictions? How do we sell our competitive advantages and target our marketing campaigns to the greatest effect? Not only are these marketing questions a critical facet of the business issues, marketing will overlap with the other issues -- such as location, logistics and legal.

Legal

As we'll discuss in the following sections, there will be tremendous opportunities and challenges that grow out of differences between legal rulesets of seasteads and those of coastal states. Indeed, when it comes down to it, most seasteading startups will take advantage of the global patchwork of rulesets. That is why we want to emphasize the critical importance of seasteaders integrating legal expertise into their organizational DNA. That means including at least one legal expert as part of one's founding team in almost all cases. As one of our colleagues put it: "A seasteading venture outsourcing its legal expertise would be like a private space company outsourcing its engineering talent." In other words, most seasteading companies are at their cores a *legal* play of one sort or another. Each will want to have an understanding of the law as one of its core competencies.

In "[Charting the Course: A Guide to Seasteaders' Legal Strategy](#)" Dario Mutabdzija and Max Borders set out, in broad strokes, the international legal regime on the sea -- including issues of jurisdictional control of the ocean extending outward from shore by a given nation state. Would-be entrepreneurs interested in such details are encouraged to read this paper. However, we hope a general overview of legal issues will suffice here.

For seasteading entrepreneurs to succeed, there will already have to be a palatable legal environment that minimizes uncertainty. That is largely because economic actors function best when the business environment is predictable. In the United States, a lot of companies incorporate in the state of Delaware. Many believe this is due to the low corporate taxes, and that may certainly be true. Historically, though, businesses choose Delaware due to a host of factors, which add up to reduced uncertainty. Among them are¹¹:

- Reputation for handling and expediting business cases with few backlogs.
- The depth of case law means it is much easier to find available precedent for legal decisions and the settlement of disputes.
- Delaware has a separate court system for business, which uses judges trained in business law rather than juries.
- It's possible to incorporate in Delaware without residing or headquartering there.

¹¹ http://corp.delaware.gov/whycorporations_web.pdf

- Non-Delaware businesses can incorporate in Delaware without paying state corporate tax and filing with Delaware is comparatively inexpensive.

Seasteaders will be looking for aspects of more robust business law like simple, low-cost incorporation and arbitration because these elements confer stability and predictability -- the stuff of a fertile legal and business climate (See also Legal Challenges in Section 3).

Indeed, if there were no U.S. federal government, it might make sense for seasteaders to fly the Delaware flag. But Delaware is only a state. U.S. federal regulatory requirements and high corporate taxes (currently the world's second-highest behind Japan)¹² make the U.S. an unideal jurisdiction for seasteaders. So seasteaders, still without their own rich tradition of case law, will want to look elsewhere to find solid, predictable business law. In particular, seasteaders will likely fly so-called "open registry flags" to carry territorial laws with them onto the sea. In some cases, seastead owners might fly the flags of states that simply leave them alone. For example, if one flew the flag of Liberia, he would not expect to enjoy any robust body of Liberian case law. However, in this case he probably prefers being left alone to access to stable business law.¹³

Open registry flags describes the practice of registering a vessel (physical platform) in some territorial nation-state different from that of the ship's owners and flying that country's merchant flag on the vessel. Ships are registered under open registry flags to reduce operating costs or avoid the regulations of the owner's country of origin. The vessel thus gains access to the laws of the flagging states -- as well as protection from other state actors -- and these laws are evoked if the ship is involved in cases of admiralty law.¹⁴

Perhaps one of the most interesting aspects of seasteading, however, is the entrepreneur's role in the creation of new legal frameworks. In fact, for many seasteaders -- specifically legal arbitrageurs (see *jurisdictional arbitrage* in Section II) -- the law will be a core competency. This may seem daunting. But most seasteaders will borrow from useful native laws and customs with relative ease--grabbing bits from successful foreign systems and, over time, weaving these together with rules and norms that arise through seastead-specific interactions. In short, many rules, regulations and laws evolve without prior design.

¹² <http://seekingalpha.com/article/257977-high-u-s-corporate-tax-rate-a-barrier-to-economic-growth>

¹³ In criminal cases, such as a murder on deck, those involved would likely be handed over to home countries so that investigations and trials to be sorted out.

¹⁴ Admiralty cases are issues that fall under admiralty law or maritime law, which is evolved ocean law. It is distinct from the Law of the Sea, which is public law determined by multilateral organizations (such as the UN). Admiralty law is "a body of both domestic law governing maritime activities, and private international law governing the relationships between private entities which operate vessels on the oceans," according to Wikipedia. Matters of marine commerce, marine navigation, shipping, sailors and the transportation of passengers and goods by sea come under admiralty law.

Naturally, seasteads will have to operate within broader international legal frameworks. Some seasteads may, in fact, integrate themselves into particular jurisdictions that will, in turn, impose certain constraints on a seasteader’s ability to innovate law. However, seasteaders who locate outside the territorial waters of sovereign states will have broad discretion in designing and implementing rulesets that are the formative bases of new law. For example, tenants or parcel owners will require rules to live by. Therefore:

- Will a developer decide to create a legal environment that is conducive to, say, research and development?
- What sorts of controls and oversight will she impose?
- Which rules and regulations work best locally? Which work better extended to other seasteads (i.e. your neighbors on the sea)?¹⁵
- How will disputes be settled within this environment?

Properly designing these local legal environments is not only central to so-called “development seasteading,” but it is *the* central mechanism through which seasteading can change the world. As long as any such rules are subject to some form of market discipline, iteration of seastead rules will bring seasteading closer to meeting the needs of its constituents--and indeed of humanity. (See also Legal Challenges in Section III.)

Mobility

As we alluded to above, mobility is a big issue for seastead entrepreneurs. Floating seastead platforms will afford seasteaders unprecedented ability to move, to cluster with other seasteads and even to travel around the globe. The issue of mobility is, of course, related to the issue of location. But for the purposes of this discussion, we want to ensure that would-be seasteaders understand mobility questions in light of two simple questions: *Who has the authority to move the seastead? How will such a move affect your business?*

For a number of the business forms, ultimate decision-making authority may not lie with the entrepreneur. Suppose, for example, that you’re the owner of a pharmaceutical startup. You lease from a lessor seastead developer who decides to locate 100 miles off the coast of South Florida. Business is good and you have access to the aging Floridian population. This is a good arrangement for you because you’re near the heart of your customer base. However, you are a tenant among a number of other tenants who would benefit from moving the seastead up the coast near New York. These businesses convince the lessor that the move would be profitable for them. You are suddenly

¹⁵ Consider a rule of thumb in subsidiarity: This rule says that tasks should be handled at the most local feasible level. (If they can’t be handled at that level, they “go up” one level of administration.) This is similar to a system of federalism.

in the minority. Now you're faced with other more daunting questions: *Is there another seasteed operating near Florida? How much will it cost to move the operations?*

Careful mobility planning will be important to people operating in the dynamic, mobile environments of the sea. Unlike buildings, seasteeds are not necessarily fixed structures. While people on land have to consider location questions, too, it is quite a different thing to consider what it would be like to have your entire office complex move to another time zone. For many, their businesses could depend on contractual commitments from a lessor or associated seasteed about location, dependable itineraries and so on.

II. Opportunities

The Secret to Seasteading Business (in the short term): Compete Locally, Not Globally

The ocean covers 71 percent of the earth's surface. So it's practically everywhere. The sea is fairly homogenous compared to land with its mountains, canyons, steppes and river basins. So if you have the right vessel, moving around is pretty easy.¹⁶ When you couple these realities with the fact that seasteaders can design novel, on-board institutions, new opportunities emerge.

For many new seasteads, a primary advantage may be found in their ability to bring new legal jurisdictions conveniently close to existing legal jurisdictions. Much in the same way an ice cream truck makes ice cream a better value proposition by bringing the product to your street, a discrete seastead business offers convenient access to goods or services that are a better value on net than what is offered within customers' jurisdictions. In the case of seasteading, this value arises from the seastead's different legal regime, which gives rise to opportunities not available on land. (An exception to would be seasteaders who take advantage not of jurisdictions, but of resources available in some part of the ocean, for example oil or manganese nodules.)

Why does running a business outside existing states' jurisdiction offer opportunities?

As we have suggested, the location of a seastead can afford certain advantages relative to territorial competitors. Another often related advantage we refer to as *jurisdictional arbitrage*. We define jurisdictional arbitrage as taking advantage of the legal, regulatory and/or tax benefits of one jurisdiction in relation to another. Such opportunities exist on land, of course:

... aerospace companies are now threatening to leave California, too. Orbital Outfitters of North Hollywood, CA and Mojave-based XCOR are startups who stand to get nailed with far higher taxes if they become profitable. A local Sherman Oaks/Encino newsletter quotes one of the businesspeople threatening to take their piece of the industry to healthier climes.

"This is a great place for us to find the expertise we need," explains angel investor and XCOR Board-member Lee Valentine. "It's a great place to build spacecraft, because we're close to the specialty manufacturers." But Valentine puts it bluntly when it comes to the taxes. Not only do other states have lower taxes, but they "are offering us good money to relocate!"¹⁷

¹⁶ European shippers of old found it easier to take the long way over sea (i.e. around the southern tip of Africa) to trade their spices, rather than take the land route. So the mobility benefits of ocean-going vessels is nothing new.

¹⁷ Valentine added in a telephone conversation that as soon as XCOR reaches profitability, he has a responsibility as a Board-member to "advise the company to leave California." And he's not alone.

<http://washingtonexaminer.com/blogs/examiner-opinion-zone/aerospace-exodus-california>

Indeed, arbitrage opportunities abound between states and countries. Consider that:

- North Carolinians flock to South Carolina annually on July 3rd to buy fireworks N.C. bans.
- Canadians come to the U.S. for surgeries to avoid waiting lists, just as Americans fly to Costa Rica for low-cost medical tourism.
- Large companies often relocate in states with “right to work” laws and lower taxes.

Seasteading, however, affords new opportunities in jurisdictional arbitrage.

Some seasteads may choose to take advantage of jurisdictional arbitrage by locating in international waters near a competing jurisdiction and offer a competitive good, service, living arrangement or business setting. For example, if the regulatory regime in one jurisdiction on shore makes barriers to entry in some industry artificially high, clever entrepreneurs can take advantage of this fact by competing outside of those auspices. An entrepreneur in the medical profession may find opportunities to profit based on the fact that her regulatory compliance costs are lower offshore. Being offshore and outside the natural geographic boundaries of any existing nation also allows for businesses to profit from jurisdictions far away from the seastead itself. For example, a seastead could incorporate in Singapore, fly a Panamanian flag and have other businesses aboard the seastead that are incorporated in various other jurisdictions around the world.¹⁸

Early seasteads will likely have to incorporate within an existing national jurisdiction in order to obtain the recognition of the international community and protect themselves until seasteads have gained international recognition--an objective that is likely decades away. While seasteading companies may have to incorporate in national jurisdictions until they are recognized, there are still plenty of opportunities to take advantage of jurisdictional arbitrage. Many jurisdictions around the world allow one to create a foreign corporate entity and then impose very little regulation on top of the basic corporate framework. This allows most rules and regulations to be determined locally aboard the seastead. The seastead’s regulatory and legal system can then be created from the bottom up. This two-layered jurisdictional approach is likely to allow new forms of business law to evolve.

Some examples of friendly jurisdictions in which development seasteads or discrete seastead businesses might incorporate include:

- Seychelles
- St. Kitts & Nevis Islands
- Cayman Islands

¹⁸ For more on this subject, see papers from The Seasteading Institute’s legal research division. <http://seasteading.org/research/law-and-politics>

- Panama
- British Virgin Islands
- The Bahamas
- Cook Islands

All of these jurisdictions are known for their predictable, foreign-friendly tax, legal, and regulatory frameworks.

What kinds of opportunities arise from doing business at sea?

Let's explore the kinds of opportunities that arise from the unprecedented ability to live and work on the sea.

As we suggest above, jurisdictional arbitrage affords competitive advantages to seasteading businesses, including *cost savings* (through tax and regulatory relief) and *risk mitigation*.

Cost savings are any reduction in overhead costs that arise from incorporating in one jurisdiction rather than another. For example, one cost saving from jurisdictional arbitrage might be lower regulatory overhead costs. Regulatory costs¹⁹ can cross many facets of a business, including labor, workplace and safety compliance (which is sector dependent; according to a Mercatus Center study, it is about \$1,700 per employee in manufacturing), product licensing, fees and tax reporting compliance.²⁰ The Heritage Foundation estimates regulatory overhead currently costs around \$1.75 trillion per year in the US.²¹ These estimates are conservative given the limitations on what sorts of information the studies' authors could realistically ascertain. In any case, such costs are referred to as a "regulatory tax"²² despite being non-transparent relative to other types of taxes such as those on income or sales. So how might regulatory arbitrageurs benefit from doing business at sea?

American readers are familiar with the FDA -- the U.S. Food and Drug Administration. Similar regulatory bodies exist in other countries. Everyone agrees these agencies are put in place to ensure pharmaceuticals are safe and efficacious for consumers. But people also understand that the approval process for many drugs can take years and compliance is very expensive. Such a regulatory regime not only delays potentially life-saving therapies' time to market, but drives up the cost of the drug once it's available.²³ What if a pharmaceutical company with a seastead could circumvent this

¹⁹ Now, we do not wish to argue that investment in, say, seastead worker safety ought to be zero relative to what companies spend in the U.S. in order to comply with the regulatory state. What we would argue is that there is probably enormous cost-savings to be achieved from conscientious companies formulating their own cost-effective safety programs, which will be unique to each industry and even to each company.

²⁰ http://mercatus.org/sites/default/files/publication/MC_RSP_RA-WorkplaceSurvey_001201.pdf

²¹ <http://blog.heritage.org/2010/09/22/red-tape-rises-again-cost-of-regulation-reaches-1-75-trillion/>

²² See also <http://cei.org/op-eds-articles/ten-thousand-commandments-how-much-regulation-enough>

²³ <http://www.washingtontimes.com/news/2011/feb/15/caution-kills/print/>

process to some degree? What if a seastead could invite patients to buy therapies without the need for FDA approval? Currently, U.S. citizens have to travel to other countries to benefit from therapies which aren't (or aren't yet) FDA approved. If this took place right off the coast, it would be far more convenient for customers. Cost savings would result for both the drug developers and their customers.

Another cost savings is in arbitrating for a lower *tax burden*. Many of the legal jurisdictions attractive for seastead development (listed above) have low or no corporate income tax rates. This fact has driven investors and businesspeople alike to relocate to some of these locations. Some want to put more of their profits to use as capital in growing their businesses. Others simply want to keep more of what they earn. Either way, tax competition is driving many people to relocate -- and some even to take new citizenship in other countries. "As many as 743 [mostly high net worth individuals] ... with American citizenship or legal resident status renounced their U.S. citizenship in 2009" writes Jonathan Berr in AOL's *Daily Finance*. This was "three times as many as in 2008 -- which resulted in a waiting list for people to say farewell to the red, white and blue at the U.S. Embassy in London".²⁴

Risk mitigation is a benefit that arises from incorporating in a jurisdiction with a more stable business climate. In other words, some places offer more predictable rules over time. Jurisdictions subject to wild fluctuations in the law from one year to the next make it difficult to plan for the future. Of course, planning for the future is critical to a venture's success. The marketplace can be particularly hostile and unpredictable. But so too can the legal and regulatory environment. If businesses find a predictable business climate, they can focus on their core competencies, which means fewer resources going to legal compliance and adaptation/transition costs.

Not all opportunities from seasteading arise from jurisdictional arbitrage per se. Some opportunities arise due to considerations like climate or proximity to new customer markets.

Access to resources. Floating seastead platforms will have the unprecedented ability to set up operations near ocean- and ocean-floor resources. In the next section, we'll discuss specific resource-based industries that may now be cost-effective due to seasteading.

Proximity to customers/markets. Beyond jurisdictional arbitrage, seasteading offers one opportunities simply by virtue of proximity to one's customers. Such proximity may reduce transportation costs or allow the entrepreneur new access. It may seem counter-intuitive to think that transportation costs are lowered when one has to access a seastead by boat, ferry or helicopter, but consider that it may be cheaper and easier for coastal residents to take a boat to a seastead than to fly across the country. A casinostead proprietor operating off the coast of the North Carolina Outer Banks will take advantage of jurisdictional arbitrage, but he will also take advantage of the fact that customers in

²⁴ <http://www.dailyfinance.com/2010/07/20/more-rich-americans-renounce-u-s-citizenship-for-lower-taxes/>

Wilmington, NC (a population center) are closer to his casinostead (just off shore) than to Las Vegas, NV or Atlantic City, NJ.

What seasteading industries are likely to emerge?

From new opportunities arising from working in new locations and new jurisdictions, seastead-based industries are likely to emerge.

Medical Tourism. Medical tourism currently offers customers a means to engage in their own form of jurisdictional arbitrage. From getting a dental implant in Costa Rica to getting heart surgery in India, people are planning interesting holidays along with their treatments. Medical tourism need not be in exotic locations, however. It can be simple and functional. A Canadian can get a CT scan across the U.S.-Canadian border and avoid Canadian wait times due to rationing. What could be simpler and more functional than fearful, wait-listed Vancouverites traveling to a seastead-platform replete with all manner of inexpensive diagnostics? As Matt Ridley writes:

The big question is over health care. In recent times it has tended to invent effective but expensive new procedures [...] such as surgery, scanning and radiotherapy. But some think it might be on the brink of finding cheaper therapies through regenerative medicine and genome sequencing. The latter's cost is down by 99% in about a decade, far faster than Moore's Law.²⁵

Medical tourism is thus one of the most salient opportunities for seastead businesses. As with existing medical tourism offerings, seasteaders may face strict rules (most notably in the U.S.) about advertising medical services or products. Dealing with this issue will likely prove one of this model's biggest challenges early on. That said, seasteading's friendlier regulatory environment could make many of these newer, cheaper diagnostics and therapies available more quickly.

Fishing and Aquaculture. Fishing and aquaculture, when carried out responsibly,²⁶ can be an excellent opportunity to profit while contributing to solving the problem of feeding the world's growing

²⁵ <http://online.wsj.com/article/SB10001424052702303848104576383783269895842.html>

²⁶ The ocean environment provides unique access to seabed resources, aquaculture opportunities, and energy captured from the sea. Deep sea resources are "unclaimed" but care should be taken. Stewardship of common-pool resources is critical for long-term harvesting and use. As property institutions evolve along with sea settlement, good stewardship will follow. (For more detail regarding stewardship of natural resources through seasteading, see also Section Three of "Charting the Course for a Seasteader's Legal Strategy" by Dario Mutabdzija and Max Borders.) Working with a view to leaving the ocean cleaner and more bio-diverse than we find it means to act responsibly toward future entrepreneurs and generations who may live and work on the sea. Tradable fishing quotas and similar systems of local stewardship are a great start. Seasteaders will want sustainably to harvest the ocean's bounty.

population sustainably. There are legal differences between engaging in aquaculture within EEZs²⁷ and on the high seas, but opportunities in both areas abound. At minimum, seasteading can enable high seas harvesters to reduce transportation costs. But there may also be opportunities to create floating aquaculture centers or make use of Catch Shares²⁸ programs that allow fish farmers or fishermen (respectively) to breed and replenish stocks within the natural ocean environment.

Fossil Fuels. Fossil fuel companies are on the cutting edge in building sea platforms. So in many respects, they could be considered the first seasteaders. Take, for example, this recent story from *Popular Science*:

Shell is making good on its promise to build the largest object ever to float on water, announcing Friday it would build the Prelude FLNG Project to harvest offshore natural gas fields. The gargantuan ship will suck up the equivalent of 110,000 barrels of oil per day.

The floating liquefied natural gas facility will dwarf the biggest warships, weighing in at 600,000 metric tons. By contrast, the U.S.' next-generation Ford-class supercarrier will displace 101,000 metric tons of water. Shell says its ship will be able to withstand a category 5 typhoon.²⁹

We can only imagine other energy companies will follow suit. There is likely to be considerable resistance from environmental groups to energy companies investing in fossil fuel corporate seasteads. But as the price of motor fuels increases, offshore exploration suddenly becomes more cost effective than ever. And if that trend continues, it is likely we'll see permanent sea-based outposts for workers in the fossil fuels industry and their families.

Mining. It is not clear whether ocean mining will be cost-effective in the near term. It depends on the price of a given metal. But over time, it may be inevitable that ocean miners move offshore and reduce costs by building seastead operations. Indeed, ocean mining is already happening:

But new technology and worldwide demand have combined to make mining for these metals economically feasible for the first time. A breakthrough project is moving forward in New

²⁷ Ocean-based resources within Exclusive Economic Zones (EEZs) are a different matter. EEZ resource are claimed by existing countries, so use of these would require negotiating treaties. Both to avoid conflict with other nations and to act as environmental stewards, seasteaders will have to develop the sea responsibly, whatever the relative laxity of the jurisdiction.

²⁸ Catch share or transferable quota programs are already helping fishermen avoid the dangerous depletion caused by open-access fishing. These quasi-property rights solutions are the kind of innovations that indicate it will be possible for seasteaders to be good stewards of ocean resources and -- in the process -- contribute their own forms of property and resource law. http://www.edf.org/documents/10967_us-catch-shares.pdf

²⁹ <http://www.popsci.com/technology/article/2011-05/harvest-natural-gas-ocean-shell-building-worlds-largest-man-made-floating-object>

Guinea, and new rules to govern deep ocean mining will be set by an international authority this spring [2009].

[...]

Scientists have long known about remarkably pure concentrations of metals found near some of the hydrothermal vents, nicknamed "black smokers" because they resemble underwater chimneys.

The vents sprout in areas with heavy seismic activity, including the mid-Atlantic ocean ridge and the Pacific's volcanic "Ring of Fire," which stretches along the west coast of the Americas, to Asia and down near New Zealand. There, the earth's spreading plates allow sea water to seep into the earth's crust, where it becomes heated, leaching precious minerals from the surrounding rock.³⁰

As with fossil fuel extraction, there will be opportunities for seasteaders to offer direct or ancillary benefits to ocean miners. Seasteading may also offer a quantum leap in the modes of extraction that are possible in deep water environments. Indeed, physical seasteading platforms need not be retro-fitted oil platforms. If the price is right³¹, new operations will take on lives -- and designs -- of their own.

Wave and Solar Energy. Fossil fuels are one thing, but what about energy captured from the ocean itself? And what about new possibilities for gathering and storing energy from the sun? Those familiar with energy economics will be justifiably skeptical of wave and solar energy sources in the near term -- particularly as these compare with the price of fossil fuels. But allow us to offer a quick suggestion about the viability of wave and solar sources in the medium-to-long term.

There is currently a wealthy, conscientious niche market for 'green' wave and solar energy. In certain parts of the ocean environment, these forms offer an abundant energy supply. Now, consider Moore's Law -- which is the idea that technological advancement tends to follow a doubling pattern. If the technology for wave and solar energies -- in both collection and storage -- follow this doubling pattern, they may become cost effective in the medium term. This innovation will diffuse as many other "bourgeois" technologies have -- large, clunky and expensive at first (like cellphones), but better, faster and cheaper over time. We therefore don't want to dismiss wave and solar energy out of hand. Instead, we want to suggest that, while they are not currently viable outside of a niche market, they could become competitive with fossil fuels in the future. Seasteading offers a unique opportunity to test this hypothesis -- particularly as the ocean has far more space for experimentation. As one *Wired* writer quips, "we can't help but think that this would be a great way to power The Seasteading Institute's floating ocean colonies."³² Will these sources be better and more cost effective than, say, large diesel generators? Perhaps not at first. But over time -- maybe in

³⁰ <http://www.physorg.com/news157815293.html>

³¹ <http://www.nature.com/news/2011/110703/full/news.2011.393.html>

³² <http://www.corporateclimate.net/green-technology-climate/clean-tech/153-floating-solar-islands.html>

combination with fossil fuel sources -- wave and solar energy is likely to figure into the seasteading portfolio, particularly as the ocean has the space for the construction of mega-panels. This bright future is not without its dark spots however. It is entirely possible that governments will attempt to interpret their laws in as strict a fashion as they can if they are being encouraged to dissuade seasteaders from locating in their EEZ. This could translate to governments deciding that photons of light hitting particular patches of ocean, waves, wind, and other sources of energy are a resource, and one that the coastal state has the ability to regulate and prevent seasteaders from harnessing. Whether or not we see such interpretations emerge may be a question seasteading firms face sooner than later.

Tourism. Location-specific seasteading tourism offers an interesting set of opportunities. Of course, it will be interesting for some people just to be among the first to visit a seastead. What about a floating city? What kinds of interesting things might one find in a metropolistead? With time, of course, the novelty could wear off. People will value amenities seasteads provide beyond mere novelty. Consider:

- *Ecotourism* - What if an entrepreneur were to build an all-Inclusive seastead resorts near an eco-tourism destination on land? A government body may protect a national park from exploitation, but allow visitors. Might seasteading provide a relaxing outpost just offshore? Tourists could divide their time relaxing on the seastead and hiking in beautiful natural areas.
- *Deep-sea* -- Tours of the deep will go down in cost due to the presence of sophisticated seastead platforms equipped with submersibles and associated gear. By getting people closer to ocean launching points above interesting areas in the deep ocean, seasteads are likely to become hubs for deep-sea tourism in the future.
- *Novel Environments* -- Can the look and feel of seasteads be a tourist attraction? Imagine for a moment the following scene:

You set off on a ferry from the coast. Two hours pass. The ferry approaches a distant structure. You start to make out the spires of a space-age city. They rise up like sparkling, segmented flutes from the green brine. At first it looks like a single entity--a floating metropolis. But soon you can see many of the buildings are clustered together on hexagonal platforms that fit together like a honeycomb. On the periphery, a hodgepodge of boats and shanties teem with sun-browned merchants who truck and barter. Up to this point you've only read about these structures. Now you're gazing upon them. Soon you'll be standing atop one of these feats of engineering, ready to walk among the dreams of architects.

Seasteads will take on many forms. Some of those forms will be architectural masterworks designed by the world's best and brightest. Many will never have seen anything like this before. and we think people will want to walk among these forms to wonder at them.

- *All-inclusive* - New seasteed designs will also give rise to structures that will be competitive with all-inclusive cruises and resorts, even as they complement them. Resort seasteeds in the Caribbean could offer novel amenities near legacy vacation spots.
- *Casinosteeds* -- A somewhat permanent seasteed casino could thrive off the coast of areas where gambling is prohibited. In an example above we offered a “Las Vegas of the Atlantic” -- just off the coast of the Outer Banks of North Carolina. Perhaps it appears near Florida. Casinosteeds could pop up in interesting locations, particularly places that are land-locked by jurisdictions in which gambling is heavily controlled or banned.

Tourism offers more opportunities for variation than we can list here -- from sports and recreation to fun and sun.

Pharmaceutical Research. Potentially, pharmaceutical research can proceed more quickly on seasteeds due to the customized legal environment a seasteed could tailor for this purpose. In this way, jurisdictional arbitrage opportunities abound. One should not be too sanguine, of course, about opportunities in pharmaceutical exports. Drugs still have to go through the approval processes of various regulatory agencies to be sold in many states around the world. It is important to keep in mind that, although novel jurisdictions may offer new opportunities for research or lower costs, firms must still adhere to generally agreed upon ethical and scientific standards if they expect to sell products or stay in business for long. Novel jurisdictions can allow for new efficiencies, but they won't change the fact that consumers care about a company's business practices.

Artificial coral reefs may figure nicely into the seasteed drug developer's competitive advantages. Man-made undersea structures manage to attract all manner of flora and fauna.³³ The biodiversity found in coral reefs is significant and this diversity has proven beneficial to humans. Scientists have identified these beneficial chemical compounds -- molecules only found in coral reefs -- and have gone on to develop said compounds into medicines. Might these be better managed and more accessible to seasteaders? While human activity can endanger reefs, we at least know how to fashion artificial environments on which these ecosystems are likely to form over time. Consider this from the U.S. National Oceanic and Atmospheric Administration (NOAA):

³³ Artificial reefs may figure into Seasteading tourism, as well: “Creating a reef may be to enhance the wild fish etc populations in an area, and at the same time help boost tourism by giving scuba and snorkel enthusiasts something to look at. Some scuba people are qualified wreck divers and no doubt really appreciate an extra wreck or two. So there's a ship available which is no longer economical to run or repair and is ready to be broken up. On several instances these ships, military or mercantile, have been obtained by conservation/tourism interests. They are very carefully prepared, having all oil removed plus any electrical cable or other items that could be detrimental to sea life. Once prepared they are towed to the required area and sunk.”

<http://www.aquaristsonline.com/blog/nature/coral-reef/artificial-coral-reefs-good-or-bad/>

Many species found in coral ecosystems produce chemical compounds for defense or attack, particularly the slow-moving or stationary species like nudibranchs and sponges. Searching for potential new pharmaceuticals, termed bioprospecting, has been common in terrestrial environments for decades. In fact, nearly half of the medicines in use today have their origins in natural products, mostly derived from terrestrial plants, animals, and microorganisms. However, bioprospecting is relatively new in the marine environment and is nowhere close to realizing its full potential. Creatures found in coral ecosystems are important sources of new medicines being developed to induce and ease labor; treat cancer, arthritis, asthma, ulcers, human bacterial infections, heart disease, viruses, and other diseases; as well as sources of nutritional supplements, enzymes, and cosmetics. The medicines and other potentially useful compounds identified to date have led to coral ecosystems being referred to as the medicine cabinets of the 21st century by some, and the list of approved and potential new drugs is ever growing.³⁴

To our minds, there could be tremendous advantage to setting up shop near these natural laboratories or building them under seastead platforms.

Biotech and Biomedical Research. We believe a plethora of scientific and technological advancements will be developed on seasteads. In fact, we think these facilities will be among the first ventures to take to the sea. From embryonic stem-cell research to gene therapies and genetic customization, there are a number of promising research areas that are currently retarded by regulation. Despite this, there are also currently other countries, such as Singapore,³⁵ which are actively trying to create a biotech sector via all manner of subsidies as well as a favorable regulatory environment. The question will be whether or not seasteads have something to offer *beyond* what countries like Singapore have to offer in this sector. Again, seastead firms should look to local rather than global advantages.

Seastead innovations could also give rise to new markets in *direct-to-consumer* biotech, as well (and consumers do care about whether they have to fly to Singapore or only head 24 miles offshore to purchase a product or service). Such innovations in the areas of biotechnology and medicine always risk bans, moratoria or heavy regulation by territorial governments. This is especially true for direct-to-consumer biotech, which is controversial because it has the potential to bypass physicians and other licensed professionals. Information technology and the short distances empower consumers to do business with these companies directly -- in some cases despite lacking a complete understanding of the product or service. While we would not wish to wade in to related controversies here, it's a fact that regulatory agencies are busy regulating, particularly in the US and Europe -- so much so that it may soon be cost-effective for many companies to do seasteading business.

Consider recent events surrounding the direct-to-consumer company 23andMe, which carries genome analysis services. According to *The New York Times*:

³⁴ <http://coralreef.noaa.gov/aboutcorals/values/medicine/>

³⁵ <http://www.biospectrumasia.com/content/080507SGP3548.asp>

23andMe and two other recipients of the letters, Navigenics and DeCode Genetics, sell tests that scan a person's DNA, looking at genetic variations that can suggest whether a person is at a higher or lower risk of getting diseases like cancer or diabetes. ...

The F.D.A. action is the latest salvo in a long-running debate about whether and how such tests should be regulated.³⁶

Whether or not the FDA effectively shuts down 23andMe and similar companies -- or simply raises the costs of doing business -- this latest effort is an object lesson in territorial governments' willingness to intervene in biotech markets. Whether or not significant information asymmetries exist between companies and customers in this area -- and there are real ethical implications of such asymmetries -- customers may demand biotech services, anyway. Entrepreneurs will likely find a way to supply them.

Environmental Research Zones. In addition to possibilities for harvesting minerals from "black smokers," deep ocean areas are also interesting to scientists due to their unique flora, fauna and geology. If nothing else, we can imagine research platforms side by side with minerals companies. Researchers will likely want to establish a presence near other zones such as coral reefs, unique geological formations and other sea-based research zones. For example, after the Deepwater Horizon oil spill, many scientists were interested in the effects of the spill on gulf waters, habitat and ecosystem. A more mature seasteading industry might have allowed a more robust research outpost to position itself in the area of the spill.³⁷

Non-Location-Specific Environmental Research. Other forms of environmental research won't necessarily be location-specific. Some scientists may be studying the causes or effects of increased levels of ocean algae. Their work may take them to various regions around the globe. Some environmental research might just as well be carried out on legacy research vessels, but we can imagine situations in which better data can be collected and analyzed -- at lower cost -- on seasteads.

Adjacent businesses. With the development of a major seasteading industry, there will be businesses that pop up to serve this industry. From fueling seasteads to feeding seasteaders, adjacent businesses are those whose products and services will be demanded by those living and working on seasteads.

Intentional Communities. People are both experimental and tribal. In as much as they can, they try out new forms of society, alternative lifestyles and even new rules for governing their behavior. The extent to which entrepreneurs can offer intentional communities the space to live and work is the extent to which they can profit from people who wish to create new ways of living that are infeasible or illegal in the coastal state.

³⁶ <http://www.nytimes.com/2010/06/12/health/12genome.html>

³⁷ We can also imagine a robust seasteading industry capable of rapid containment and clean-up assistance.

III. Challenges

We call the costs of doing business on the sea “ocean taxes”. These ocean taxes include legal, engineering, existential, and logistics challenges that make seasteading more difficult and costly and should be factored into calculating overhead. Because of the significant costs of life at sea, seasteads must create value for both themselves and the "outside world" in excess of the ocean taxes they'll have to pay. In fact, it is this ocean-tax that has thus-far prevented seasteading from being a feasible, scalable and multifaceted way of life. If one had a business that could only operate on the moon, that business better produce some amazing products and services far in excess of the monstrous costs it would incur maintaining operations in a lunar environment. It is only now -- due to the increasing costs of doing business within established national jurisdictions -- that we suspect the "government tax" is beginning to exceed the "ocean tax." That means that there are many new businesses, industries, or ways of life that are finally becoming cost-effective enough to establish on seasteads rather than on land.

From another perspective, we know that good institutions give rise to prosperity. Consider that Hong Kong circa 1900 was a desolate rock with few resources apart from a natural harbor. One hundred years later it was arguably the most prosperous place on earth. But why? As we have suggested, good legal rulesets. Much of the impetus behind seasteading is the idea that good institutions are likely to co-evolve with seasteading ventures. Therefore, despite the ocean tax, seasteading opportunities lie far more in good institutions as in sun, waves and ocean resources. Ensuring the development of good institutions starts with addressing fundamental questions about the law.

Obviously if we at The Seasteading Institute thought these challenges were insuperable, we wouldn't be in business ourselves. Instead, we see our role as arming would-be entrepreneurs and seasteaders with better information about these challenges so they can be prepared to confront them--i.e. lowering the cost of the Ocean Tax relative to the costs of doing business on land.

What are some of the legal challenges?

In Section II, we touched on some of the major issues of seasteading, including legal issues. That these legal issues become costly, difficult and seasteading-specific also make them challenges worth focusing on here. It won't be easy for some arbitrageurs to make a patchwork of international legal considerations a core competency. But if customers are to come from many different countries and many different jurisdictions, navigating this strange legal environment is a cost of doing business. Thus, for example, using open registry flags will be new to some entrepreneurs who will be starting their first sea-based ventures, and similarly, operating under the mix of jurisdictions likely present on any seastead will bring forth novel challenges for seasteading businesses and even for their end consumers.

The first “ocean taxes” are thus legal challenges from existing states. Seasteading is a new phenomenon that could be perceived as a challenge to the multilateral regimes currently under the stewardship of the world’s international bodies. It will come as no surprise, then, if or when the world’s states erect obstacles to seasteading -- either through new policy initiatives or through more clandestine means.³⁸ With foresight, preparation and awareness of these issues (manifested especially as good PR), seasteading can demonstrate its benefits--whether to individuals, businesses and coastal states. We believe, fundamentally, that seasteading is a win-win undertaking and that such can be communicated to stakeholders across the board.

Preparation and awareness come at a cost. Seasteaders will have to invest in forming the new legal frameworks in which they will operate, as well as remain in compliance with whatever new legal frameworks are already on the sea. Difficulties are likely to arise in the areas like commerce, supply chain/customs, immigration and mainland access.

- *Commerce*--Seasteaders may face difficulties trading with customers in certain jurisdictions. Consider various shades of commercial activity from white to black. White market activity is trade that is covered explicitly by trade agreements. Black market activity is trade that takes place in contravention of the laws of either a seastead or the mainland jurisdiction. Therefore, much of the commercial seasteading activities could be considered as various shades of grey. In other words, a product or service that is heavily regulated or prohibited on land may not be on a seastead. But the parties to an exchange may cross those jurisdictions. The key will be to ensure that mainland jurisdictions are prevented from creating *de facto* or *de jure* restrictions on trade with seasteaders due to the degree of market “greyness.” Some grey markets will be tolerable, others will not. Thus, when it comes to jurisdictional arbitrage, we suggest entrepreneurs pursue market activity toward the “lighter” end of the spectrum. Even activity that is not proscribed on the seastead may invite the ire of territorial jurisdictions and move them to invest in measures that curb any darker grey-market activity. That could have spillover effects for other types of commercial activity with seasteaders -- even white-market trade. There are no hard and fast rules here, as this is almost entirely uncharted territory. Business will lead a delicate diplomatic dance beyond traditional open registry legal precedent. We recommend that seasteaders be pragmatic in their trading and marketing practices -- especially as large, leviathan states will have lots of muscle, no doubt with the backing of special interests -- i.e. competition on land. For more on this, please see The Seasteading Institute’s series of legal research papers, which address these challenges in greater detail.
- Supply chain/customs -- As we mentioned before, early-stage seasteads compete locally rather than globally. As such, a development seastead and its tenant companies must

³⁸ For more on interference by state actors, see “Building the Platform: Legal Challenges and Strategies for Seasteading” by Max Borders and Dario Mutabdzija (forthcoming from The Seasteading Institute).

establish positive relationships with the customs and immigration departments of the coastal state(s) through which they'll have to pass goods (and people). Some existing businesses, such as cruise lines and airlines, have already established these relationships. Similarly, seasteading companies will do well to speak with these agencies early and often so as to ensure the existence of an efficient, low risk, and comfortable relationship for everyone involved. Individuals and/or products will likely be moving through these jurisdictional boundaries on a daily basis. As with any other export businesses, seasteading importer/exporters should use the following rules of thumb to reduce legal costs and other complications pre-emptively:

1. Know the tariffs, quotas, and regulations surrounding the import/export of your product from the seasteading into the coastal state.
2. Know your business partners and make sure they're similarly informed as to any applicable laws or customs bottlenecks.
3. Understand the coastal state's public policy stance on your business and work to help the public understand the benefits of allowing individuals voluntarily to do business with the seasteading's tenant companies.

It's better to prevent fires than to put them out.

- *Immigration* -- It's one thing to transport goods under the jurisdiction of the seasteading's flagging state. It's quite another to deal with tracking people as they come aboard and exit the seasteading and the coastal state. Seasteaders may want to live on the seasteading and work on land, or vice-versa. Many seasteading customers will choose to spend their weekends at the seasteading spa. Whatever the case, these interactions will result in a complicated mix of immigration issues depending on the policies of the seasteading and of the coastal state. In the U.S. for example, individuals holding foreign passports are required to enter the country through an official port of entry, while US citizens can come and go more easily. Individuals will also have to deal with a complicated mix of reporting and compliance issues relating to any income earned while aboard the seasteading, etc.--at least in the short term.

Finally, how will seasteaders handle refugees and stateless persons? If a seasteading decides to allow these individuals to stay aboard the seasteading, what would become of them if they suddenly had to be airlifted or otherwise transported to a nearby coastal state for hospitalization? As previously mentioned, dealing with these political challenges will likely prove to be some of the most difficult issues seasteading firms face.

What are some of the engineering³⁹ challenges?

³⁹ For more on the engineering challenges of seasteading visit here: <http://seasteading.org/research/engineering>

There are two categories of engineering challenges--those we can expect in the next few years till perhaps the next decade and those that will come up in the long-term once structures are purpose-built as seasteading settlements.

Short-term engineering challenges include redesigning and refurbishing existing vessels or platforms for permanent or semi-permanent business solutions. Many of the first seasteads, for example, will likely be re-purposed cruise ships. Cruise ships are usually built specifically as temporary accommodation for tourists rather than permanent residences for professionals who are looking to work aboard the ship for extended periods of time. Cruise ships also lack office space and other adequate facilities that will likely be necessary given the requirements of seasteading firms and residents.

Long-term engineering challenges will center on technologies that will help seasteads achieve economies of scale. For example, once the technology exists for building inexpensive and reliable breakwaters, seasteads will be able to scale to much larger sizes. We can imagine floating platforms able to carry cranes, cargo from container ships, office complexes, business parks and residential housing.

What are Some of the Political Challenges⁴⁰?

We would be remiss in failing to mention the political challenges of seasteading. These challenges overlap to a great degree with legal challenges. But here we'll concern ourselves more with the process -- that is, the machinations -- though which political issues are likely to arise.

So what does political economy have to tell us? The basic idea is that we sometimes think of political operatives as being different from actors in a marketplace. But some economists are able to explain a number of phenomena in political economy by assuming that these political operatives are basically self-interested. It would take us too far afield to summarize these insights in any great depth, but we can highlight some major relevant concerns.

Interest-seeking -- Interest-seeking behavior is that characterized by firms who use political and legal means to make money or to hamstring competition. Political operatives benefit from campaign dollars, lobbying perks and threats of withdrawing political support. It's easier to engage in interest-seeking behavior *within a jurisdiction*, because groups (often firms) usually leverage regulations or statutory subsidies to gain some market advantage. The beauty of seasteading is that seasteading firms will be more immune to such practices thanks to jurisdictional arbitrage--but *not fully immune*.

⁴⁰ For more information on the political and legal dimensions to seasteading, see the work of Patri Friedman and Brad Taylor (political) and Dario Mutabdzija and Max Borders (legal) here: <http://seasteading.org/research/law-and-politics>

For example, despite the fact that seasteading ostensibly falls outside of national jurisdictions, some countries claim the right to seize vessels due to “threats” to the nation (where threats is liberally defined). We can imagine our determined interest-seeking competitor on land using such language to press national governments to seize an entire medical seastead, say, based on “the threat” of under-regulated treatment. The on-shore business thus successfully lobbies to get his competitor shut down. In another example, a tenant on board your seastead is growing marijuana. Even though the marijuana business is completely unrelated, the lobbyist onshore succeeds in getting his government to shut down the entire physical platform due to the “threat” drugs represent.

We can also imagine lobbyists for on-shore competitors pressing their governments to find legal means to restrict or punish their citizens for doing business with seasteads. Interest-seekers may require something as simple as taxes, tariffs or regulatory requirements on seastead goods. Whatever the case, counter-lobbying will have to factor into the “ocean tax.” Seasteaders will thus do well to form a constituency of happy customers -- that is people on land who understand the benefit seasteaders provide. At the same time, seasteaders may want to engage in pre-emptive PR and counter-lobbying efforts.

Consider another example of the medical seastead that has managed to lower its costs relative to shore. Health insurance companies will have an interest in seeing that people have access to the seastead’s products and services because the insurer will prefer to cover less expensive treatments and procedures. Might an alliance with health insurers help secure common business interests?

Bootleggers and Baptists -- Unholy coalitions between moralists and interest-seekers are the most effective at restricting activities of businesses. As economist Bruce Yandall describes:

Here is the essence of the theory: durable social regulation evolves when it is demanded by both of two distinctly different groups. “Baptists” point to the moral high ground and give vital and vocal endorsement of laudable public benefits promised by a desired regulation. Baptists flourish when their moral message forms a visible foundation for political action. “Bootleggers” are much less visible but no less vital. Bootleggers, who expect to profit from the very regulatory restrictions desired by Baptists, grease the political machinery with some of their expected proceeds. They are simply in it for the money.⁴¹

Unfortunately, there is no reason why these powerful alliances will not form to limit or crush seastead competitors. Just as unions and manufacturers lobby today to place tariffs on Chinese goods, Bootleggers and Baptists coalitions are likely to form against stiff competition from offshore

⁴¹ The Seasteading Institute’s political researcher Brad Taylor has further commentary on Bootleggers and Baptists in an example from his native New Zealand. See also Professor Yandle’s commentary quoted here.

<http://bradtaylor.wordpress.com/2009/05/06/bootleggers-and-baptists/>

biotech firms, for example (Bootleggers = onshore biotech firms; Baptists = people ‘concerned’ about the safety or ethics of seastead biotech research).

Concentrated benefits and dispersed costs - A unique feature of any policy (tax, regulation or subsidy) is that a few groups or firms benefit handsomely and directly, while customers or citizens barely notice the cost of the policy. This reality creates an incentive system that gives interest groups a distinct advantage over individuals and honest competitors. Special interests and Bootleggers and Baptists coalitions, as described above, benefit from engaging in heavy lobbying activity -- and have every incentive to do so. Citizens who may lose a half-cent on the dollar have little incentive to organize or to counter-lobby. Indeed, no ordinary citizen has the incentive or the knowledge to worry about whether a new seasteading business fails (or never comes into existence) due to imposition by the regulatory state on shore.

We can sum up our concerns about special interests as follows: The primary reason seasteading has become viable is due to the economic sclerosis the aforementioned phenomena cause, slowly-but-surely, on shore. That gives seastead entrepreneurs a window of time in which jurisdictional arbitrage is possible. But things can change quickly. Who knows how long this window will be open? State actors may move quickly to thwart competitive seasteads, or they may move slowly. In a more ideal case, seastead competition forces some jurisdictions to lighten their regulations. Whatever happens, there are currently opportunities to profit. Still, there is political risk on the sea, just as there is on land.

Conclusion

This paper has been about opportunities and challenges of starting seastead businesses. We’re firmly convinced that the net cost of the “Ocean Tax” is going down and the net cost of the land-based “Government Tax” is going up. If true, this fact alone represents a set of interesting opportunities for entrepreneurs who are considering an effort to create value from platforms at sea. Because there is potentially lots of value waiting to be captured there, we wanted to give entrepreneurs a more complete picture. This picture includes: the overall context of starting a seastead business as it relates to potential business forms and issues; opportunities and industries likely to arise due to location and institutional dynamics and; legal, engineering and political challenges. Armed with the very best information and enlightened speculation, seasteaders will some day -- perhaps sooner than many realize -- create bustling new societies on the waves.

Appendix : Seastead Aggregations

Seasteads will be modular and mobile, both physically and (due to the extra-jurisdictional nature of the ocean) legally. Thus seasteaders will find it beneficial to aggregate and re-aggregate their seasteads in a dynamic process that isn't available to us on land. The result of this process will be new challenges and opportunities that are virtually impossible to predict accurately today. These questions aren't likely to come up right away for the seasteading industry, but it's important to be thinking about these models and how they'll affect seasteading business for at least three reasons:

- Seasteading entrepreneurs should consider how they'll position themselves from day one to maximize the chances they'll be major players when the seascape becomes significantly more complex. It may be important for seasteading companies looking to achieve long-term growth (or looking to portray such to investors) to think about physical clusters and legal aggregations now.
- Firms will want to have considered and formulated some opinion as to aggregation issues to meaningfully and intelligently discuss them. Seasteading firms will likely be among the loudest voices. If seasteaders don't consider these issues, others (including competitors) will. Seasteading firms may not like what these others will have to say.
- Finally, it must be noted that seasteading clusters could be some of the most powerful forces for redefining the international political landscape. If previous decades are any indication, we can expect that preempting the political and international legal questions that could arise will probably itself take decades. Best to start planning early.

The following are some basic ways seasteads can be aggregated, which boil down to a physical and legal aggregation taxonomy.

Informal Seastead Cluster. The inherent modularity and mobility of the ocean means that it is relatively easy for a seastead platform to pick up and move to another area of the sea. The same cannot be said for a building in Manhattan. Therefore, because seasteads have the ability to cluster together for mutual benefit, we assume at least some will try this. We can imagine, for example, a tourist cluster, complete with a theme/amusement seastead, a golfers' paradise, and a resort seastead. Each of these might have been successful independently, but their owners decide to move them together as strong business considerations recommend themselves. We'll refer to such an agglomeration as an informal seastead cluster. We say "informal" because the seasteads in this cluster have not formally or agreed to any common standards, rules or protocols.

Formal Seastead Cluster. We can imagine that a seastead cluster will benefit from introducing standards, rules or protocols. Indeed there may be a business opportunity in the administration of these. For example, might it be beneficial for seasteads in a cluster to agree to a certain maximum distance each from the other – that is in order to facilitate transportation among the seastead platforms? Might the members of the cluster agree to certain codes of conduct, as well as the enforcement of these codes by a contracted security firm? We call such arrangements "formal" in the sense that they are agreed to formally and are binding on parties to the

agreement.

Confederated Seasteads. Suppose a group of various seasteads are not geographically clustered together, but wish to share certain standards, rules and protocols. Specifically, suppose there are distant seastead outposts that crop up along a sea lane. They are not clustered together, but agree to common protective services, dispute resolution and a free trade agreement. Based on realizing such an agreement, we refer to this state of affairs as a confederated seastead, because the seasteads – while not geographically connected – are bound together by some compact or other.

Confederated Seastead Clusters (City-states). As we've seen, seasteads can be informal or formal clusters, or even distant confederations. Whatever the nature of the agreement, common standards rules and protocols have a way of binding seasteads together in meaningful ways. Likewise, we can imagine leagues of cities entering into confederation. Think of three distinct clusters: New Hong Kong, New Detroit and New Paris. Leaders -- public or private -- within each confederated seastead may find benefit to sharing standards, rules or protocols among these three cities. This may take the form of a free trade agreement or perhaps an anti-piracy compact that provides inter-cluster protective services, criminal law and rules for extradition.

The reader may notice a pattern -- one that vaguely resembles the ways legal regimes form on land. Perhaps we could carry on with outlining forms of aggregation but you probably get the idea. In any case there will be both similarities between land and sea, but differences to be sure -- many of which we cannot anticipate due to the speculative nature of seasteading. Nevertheless, some governance structures are likely to emerge. Some will be beneficial; others will not. Our hope is that the dynamic nature of seasteading as modular and mobile increases the likelihood that good governance structures emerge.